The AMERICAN SOCIETY OF HOSPITAL PHARMACISTS, an affiliate of the American Pharmaceutical Association, is a national organization devoted to the profession of hospital pharmacy and dedicated to the improvement of pharmaceutical service in the interest of better patient care in hospitals.

MEMBERSHIP in the AMERICAN SOCIETY OF HOSPITAL PHARMACISTS and the American Pharmaceutical Association is open to all practicing hospital pharmacists. With membership are included subscriptions to the AMERICAN JOURNAL OF HOSPITAL PHARMACY and to the *Journal* of the American Pharmaceutical Association, Pract. Pharm. Ed., as well as the several services of each organization.

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American Journal of Hospital Pharmacy

American Society of Hospital Pharmacists

VOLUME 15 NUMBER 8 AUGUST 1958

articles

departments

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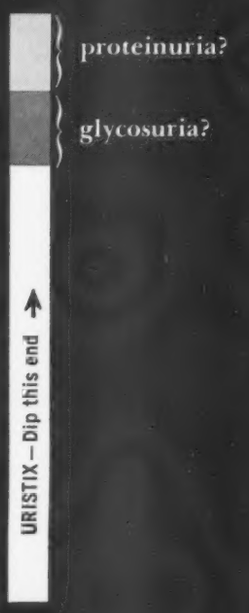

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as the president sees it—

ROBERT C. BOGASH, *Lenox Hill Hospital, New York City*

Officially, the first day of summer has long since come and gone. Frankly, its arrival impressed me not at all. Recently, however, the real clarion of summer's presence came in the disguise of an 8½ x 11 memorandum. Given to me by Rosemarie Pisanelli, the assistant director of our department, it was entitled "Vacation Schedule for 1958—Pharmacy Personnel." If for no other reason, I am now aware that summer is here.

Similar to other seasonal changes, summer has an effect upon a hospital's procedures and census. Elective surgery declines as does the number of T. and A.'s. Many of our older 'steady' clinic patients leave for vacations. Busy clinicians who refer many patients to the hospital take well earned vacations with a resultant decline in the statistic known as 'patient days.' Generally speaking, while hospitals do not entertain the classic summer doldrums of business, they do experience a slack season.

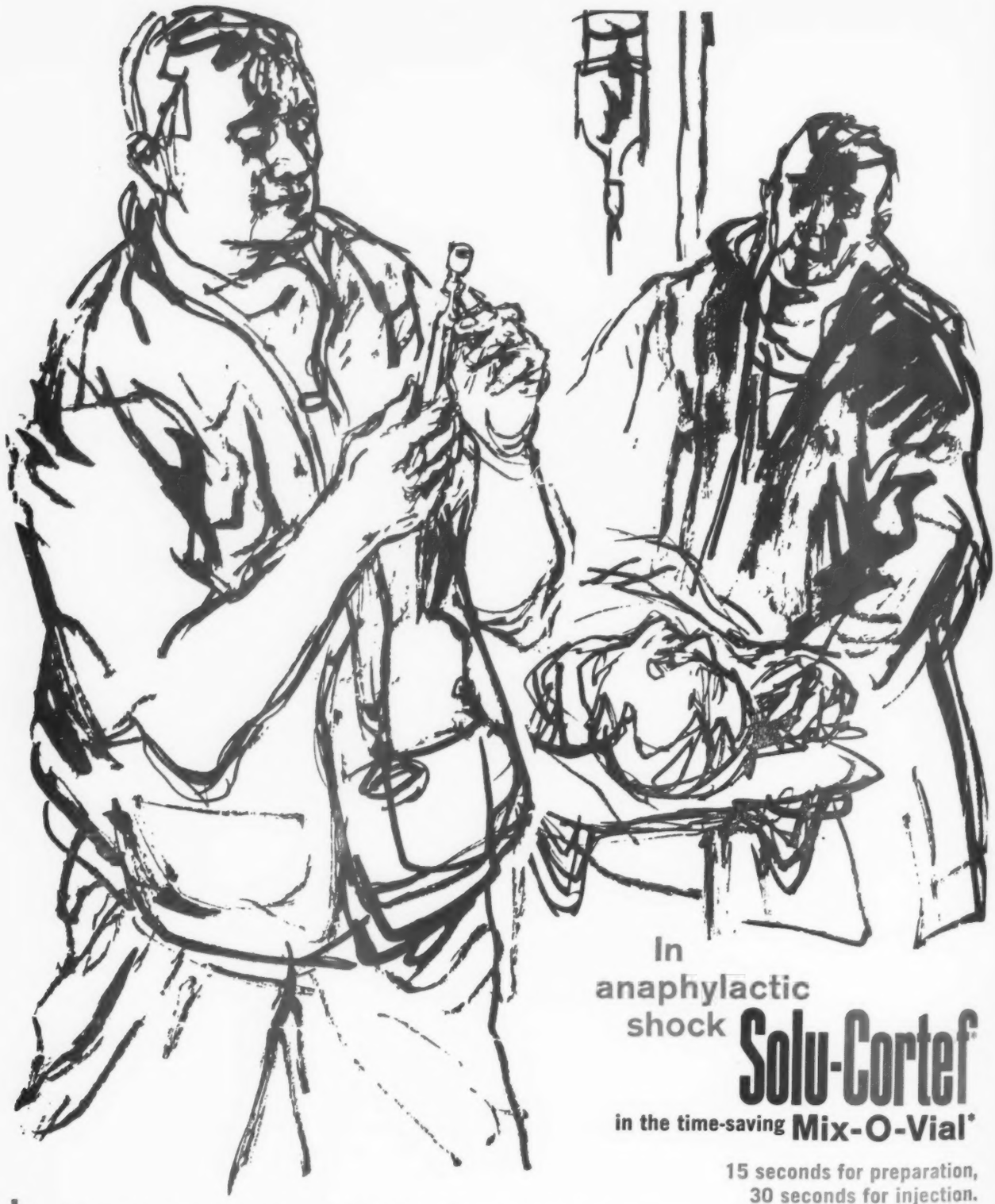
Often despite the void created by vacationing personnel, there exists an opportunity to tackle intradepartmental projects. Let us look to summer as a time allocated to better review and study, and preferably streamline, our operative pattern—physical layout and design, administrative responsibilities and pharmacy policies generally. A solid start in this direction would be to put into written form all pharmacy policies—whether ancient and little used or recently created an exercised daily. It is most important that each policy be written so that uniform interpretation can be obtained. These policies could then be critically studied with regard to their application and function in modern pharmacy service.

The revision and modernization accomplished, these policies could be projected against the future growth of the hospital with respect to its expanded services to the community proper. By this comparison, we could project the future needs and the changes and additions so necessary to continually provide safe, speedy, and economical pharmacy service to both in and outpatients. Simply put, hospital pharmacy must be adequately prepared to accept its responsibilities in handling this potential growth. Even if no expansion is planned for in your particular hospital, you could use this "summer time slack" to good advantage by thoroughly examining your department's overall service to the hospital. Such study would entail an evaluation of all current procedures and policies with a critical eye to improving, deleting from, or adding to existent policies. Throughout this effort, it should be remembered that procedure is no substitute for policy. If you have never done this before, you will find it both interesting and rewarding. Interesting because you will probably find policies and procedures that are interpreted in various ways by personnel in the same department—if not by the same person. In this respect, there will be discovered aged policies forgotten by everyone. The reward will come from the changes initiated by this active and objective evaluation. More often than not the changes will save time, aggravation, and money to say nothing of effecting clear communication on both intra- and interdepartmental channels.

Summer has often been referred to as the "clean-up, paint-up, fix-up" season. Borrowed, this slogan could easily prove to be good counsel for us. A yearly intradepartmental evaluation with subsequent recommendations to administration for action could well keep hospital pharmacy attuned and flexible to meet changing medical patterns—ready and anticipating its added responsibilities in an expanding public health program.

Finally, from a budgetary view point, steady progressive changes made each year are usually far more acceptable than the major remodeling required after a decade of stasis.

Robert C. Bogash—



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References: 1. Hull, E.: Kansas City M.J. 33:19 (March) 1957. 2. Grater, W. C.: Ann. Allergy 13:191 (March-April) 1955. *Trademark, Reg. U. S. Pat. Off.

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News

Bowles Appointed Contributing Editor

Announcement has been made of the appointment of Mr. Grover C. Bowles, Jr., Director, Department of Pharmacy, Baptist Memorial Hospital, Memphis, as contributing editor in charge of pharmacy and central supply of *The Modern Hospital.*

Mr. Bowles is a past-president of the AMERICAN SOCIETY OF HOSPITAL PHARMACISTS and has served as Chief Pharmacist at Strong Memorial Hospital in Rochester, New York and as a member of the staff of the Associate Hospital Administrators of the Memorial Hospital Association in Kentucky.

According to the announcement, *The Modern Hospital* has scheduled the following articles for coming issues: Automatic Stop Orders for Drugs and How They Work; Minimum Standards for Pharmacies in Hospitals; Distribution of Drugs in the Hospitals; Standards of Performance for Pharmacies; Utilization of Nonprofessional Help in the Pharmacy; Pharmacy Problems in the Small Hospital; Extending Pharmacy Service to the Nursing Units; and Roundtable Discussion of Hospital Pharmacy Problems.

The Modern Hospital is one of the leading hospital publications and is published by The Modern Hospital Publishing Company, Inc., 919 N. Michigan Ave., Chicago 11, Ill.

A.C.A. Passes Resolution on Small Hospitals

At the 1958 Annual Meeting of the American College of Apothecaries held in Los Angeles, the following resolutions regarding pharmaceutical services in small hospitals was passed:

Whereas, a number of small hospitals dispense drugs without the supervision of a qualified professional personnel and

Whereas, such practices are contrary to State Pharmacy Laws and to the best interest of the patient and

Whereas, the Fellows of the A.C.A. are in an excellent position, in many communities, to provide adequate pharmaceutical supervision to such hospitals

Be It Resolved that the President of the College appoint a committee to meet with the American Hospital Association, the AMERICAN SOCIETY OF HOSPITAL PHARMACISTS and the Joint Commission on the Accreditation of Hospitals with the express desire of establishing a definite procedural arrangement which would insure that these small hospitals be provided with adequate pharmaceutical service administered and controlled by trained pharmaceutical personnel.

A brief resume of all resolutions adopted by the American College of Apothecaries is as follows:

1. The College officially commended Dr. F. P. Rhoades of Detroit, Michigan for his forthright articles on the subject of a physician dispensing.

2. The College urged all companies who have as yet not done so to revise their return goods policy so as to comply with the recommendations of the A.C.A. Industrial Relations Committee.

3. Authorized the appointment of a Special Committee with the necessary funds to make a continuing study of Voluntary Health Plans so as to determine the pharmacist's role in such programs.

4. The College went on record as favoring the establishment of regulations in all states for the express purpose of curtailing the use of nonprofessional personnel in furnishing drugs and medicines.

5. To promote better interprofessional relations, the Fellows of the College were urged to make every effort to establish, on all levels, regular interprofessional meetings and to establish combined local grievance committees between physicians and pharmacists to handle the day to day problems which occur in the normal practice of the respective professions.

6. Resolved that a Special Committee be appointed to meet with the American Hospital Association, the AMERICAN SOCIETY OF HOSPITAL PHARMACISTS and the Joint Commission on the Accreditation of Hospitals to establish a definite procedural arrangement that would insure that all small hospitals are provided with adequate pharmaceutical service administered and controlled by trained pharmaceutical personnel.

7. Urged the various states to give serious thought to the establishment of an internship program which would be supervised jointly by the Boards and Colleges of Pharmacy using selected preceptors who have been properly indoctrinated in the purposes of internship.

8. Resolved to appoint a committee to study the existing Codes of Ethics and to establish a "Code of Professional Practice" which would be subscribed to by each of the Fellows of the College and which would be made available to various local and state associations for their individual consideration and use.

9. Endorsed H.R. 10527.

10. Strongly condemned and urged the immediate abolition of the practice by certain pharmaceutical companies of selling direct to physicians at the same price or lower price than they sell to the practicing pharmacist.

11. In light of the 5 year curriculum, urged the Colleges of Pharmacy to elevate the caliber of the advanced courses being taught and to modernize the contents, scope and presentation of the existing

News

courses so that the additional time provided in the new curriculum be utilized to its maximum potential.

Newly elected officers of the American College of Apothecaries to serve during the coming year include *President,* Gerald L. Nutter, Bartlesville, Okla.; *President-Elect,* Edward F. Keating, Chicago, Ill.; *Vice-President,* Henry H. Gregg, Minneapolis, Minn.; *Executive Secretary,* Robert E. Abrams, Philadelphia, Pa.; and *Treasurer,* Charles V. Selby, Clarksburg, W. Va. Regional Directors include Edward T. Mazilauskas, New York, N.Y., and Charles E. Greger, Marshalltown, Ia. Mr. Calvin Berger, New York, N.Y., immediate Past-President of the A.C.A. will serve as Chairman of the Board of Directors.

Sister Mary Etheldreda Appointed Contributing Editor

Sister Mary Etheldreda, Chief Pharmacist at St. Mary's Hospital in Brooklyn, New York, has been appointed Pharmacy Editor of *Hospital Progress,* publication of the Catholic Hospital Association. Sister Mary Etheldreda has had wide experience in hospital pharmacy and has been active in the ASHP, having served as Treasurer and a member of the Executive Committee during the 1947-1948 term.

► THE NINTH ANNUAL PUBLICATION OF "REVIEWS OF MEDICAL MOTION PICTURES" is now available on request from the film library of the A.M.A. This publication is prepared by the Council on Scientific Assembly, Motion Pictures and Medical Television, and contains reprints of all film reviews published in the *Journal of the American Medical Association* during 1957.

► GEORGE A. BENDER has been appointed Director of Institutional Advertising for Parke, Davis and Company. According to Harry J. Loynd, President of the Company, Mr. Bender will be responsible for all institutional advertising in the United States. In addition, he will have general direction of Parke, Davis' institutional advertising in all other areas of the world.

► DR. JACK E. HALDEMAN has been appointed Chief of the Division of Hospital and Medical Facilities of the Public Health Service, according to a recent announcement by Leroy E. Burney, Surgeon General of the U.S. Public Health Service.

Dr. Haldeman succeeds Dr. Vane M. Hoge, who has been appointed Executive Director of the newly-created Hospital Planning Council of Metropolitan Chicago.

As Chief of the Division, Dr. Haldeman will administer a program that he helped to organize—the Hill-Burton program of Federal grants to assist communities and States in building hospitals, nursing homes, rehabilitation centers and other medical facilities.

Memorial Hospital Internship

A one year internship program which runs from July to July is offered by the Pharmacy Department of the Memorial Hospital, Wilmington 6, Delaware. Further information regarding the hospital pharmacy internship program may be obtained from Mr. Robert Simons, Director of Pharmacy Service.

Arkansas Hospital Pharmacists Meet

A group of hospital pharmacists from Arkansas met at the University Medical Center in Little Rock on June 21 to form an Arkansas Chapter of the AMERICAN SOCIETY OF HOSPITAL PHARMACISTS.

It was voted unanimously to form a Chapter with the name "The Arkansas Association of Hospital Pharmacists." It was also agreed to hold quarterly meetings, preferably on Saturday evening or Sunday afternoon. It was suggested that some of the meetings be held at special sections of the Arkansas Pharmaceutical Association, the Arkansas Hospital Association and the University of Arkansas School of Pharmacy Seminars. Miss Lattye Goodrum, Mr. W. D. Hagans and Mr. George Provost were appointed to draw up a constitution and by-laws and to make arrangements for the forthcoming meeting.

Superstine to Study Feasibility of ASHP Publishing Formulas

President Robert Bogash has appointed Mr. Edward Superstine, Chief Pharmacist at Metropolitan Hospital in Detroit, to study the feasibility of the AMERICAN SOCIETY OF HOSPITAL PHARMACISTS' publishing a "Compendium of Bulk Compounding Formulas." This is in accordance with the following resolution passed at the 1958 Annual Meeting:

> WHEREAS the growing need for a single reference similar to the Pharmaceutical Recipe Book of the American Pharmaceutical Association to supplement the American Hospital Formulary Service has long been recognized by leaders of the SOCIETY, now therefore be it
>
> RESOLVED that the President of the SOCIETY be requested to appoint a special committee to study the feasibility and advisability of the SOCIETY publishing a compendium of bulk compounding formulas.

In carrying out the resolution, President Bogash is suggesting that a study be made to first consider such problems as solicitation and selection of formulas, compilation and testing, and publication. Following Mr. Superstine's study, he will report to the Executive Committee. Members of the SOCIETY having suggestions regarding such a project may direct them to either Mr. Bogash or Mr. Superstine.

Pfizer Publishes Career Booklet

"Your career opportunities in pharmacy" is the title of a career booklet recently made available by the Pfizer Laboratories and the J. B. Roerig and Company Division of Chas. Pfizer and Company, Inc. It is being distributed to pharmacists and their professional associations, and to high school guidance counselors, science teachers and business education instructors.

Hospital pharmacists and affiliated chapters carrying out recruitment programs will find this 32-page illustrated booklet helpful. Of particular interest to high school students seeking a career in the health field "Your career opportunities in pharmacy" describes the various fields of specialization in the profession including *hospital pharmacy.*

The booklet was prepared with the assistance of Dr. W. Paul Briggs, Executive Director of the American Foundation for Pharmaceutical Education and written by Mary Jane Burton, author of numerous books in the guidance field.

From the Committee on Historical Records

Details of a competition in historical writing in the field of hospital pharmacy sponsored by the American Institute of the History of Pharmacy appeared in the July issue of the JOURNAL.

While the competition is open to a variety of subjects, this would be an opportune time for local hospital pharmacy organizations to encourage their members to write short historical sketches of the chapters. Chapter presidents may want to appoint a committee to do this work, or some member may volunteer to do the job for the local society. A brief history of each chapter describing its origin, growth, and contributions would be invaluable in the archival collections of the AMERICAN SOCIETY OF HOSPITAL PHARMACY and quite a contribution to the total history of the SOCIETY.

According to Adela Schneider, chairman of the Committee on Historical Records, which is issuing announcements and receiving entries in the competition, only thirteen chapters have submitted their histories to the SOCIETY, and of these ten contributed theirs in 1955. Since three years have elapsed since then, each of these chapters perhaps has enough new material for an interesting sequel to the original paper.

One local organization places upon the secretary the obligation of writing the year's history while he serves in the office. In this manner the history is continuously being written and can be submitted at any future date. Other local organizations might like to try this idea.

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Southeastern Society

Jack Kirkland, Director of Pharmacy Service, Miners Memorial Hospitals, Williamson, West Virginia, was installed as President at the annual meeting of the Southeastern Society of Hospital Pharmacists held on May 16, in Miami Beach. The Southeastern Society met in conjunction with the annual meeting of the Southeastern Hospital Conference. Other officers for 1958-1959 are: James Mitchener, Cabarrus Memorial Hospital, Concord, N. C., *Vice-President;* and Perry W. Cox, Carraway Methodist Hospital, Birmingham, Ala., *Secretary-Treasurer.*

At the close of the three-day meeting, the Nominating Committee recommended the following nominations for 1959-1960: For *President:* Mary Lancaster, Holy Name of Jesus Hospital, Gadsden, Ala., and Gilbert Colina, Mercy Hospital, Charlotte, N.C. For *Vice-President*: Perry W. Cox, Birmingham, Ala., and Allen Ford, Baptist Memorial, Jacksonville, Fla. For *Secretary-Treasurer:* Mary Wernesbach, Mt. Sinai Hospital, Miami Beach, Fla., and Howard Clem, Lanier Memorial Hospital, Langdale, Ala.

These nominees are subject to a mail-ballot election, to be held this summer.

Seven papers were read and discussed in the hospital pharmacy meeting. Also President William Taylor appeared on the General Hospital Conference program with the subject "We Can Save You Money!"

Papers were presented by J. R. Fitzsimmons, M.D., Ph.D., Detroit; Robert Lantos, Galveston; Milton Donin, M.D., New York City; David L. Merrill, Fort Worth; Edward Blake, Pearl River, N.Y.; and Randall Tinker, Ph.D., Tallahassee.

The Conference heard the keynote address of Governor Frank G. Clement of Tenn.

President Kirkland announced the appointment of the following committees: *Convention:* Terry B. Nichols, *Chairman*; Lillian Price, William E. Bacon, Ruth Agnew, Thomas Cox, and John Cox. *Membership*: James W. Mitchener, *Chairman;* Malcolm Claus, and Vice-Presidents of State Societies. *Publications*: C. J. Vance, *Chairman;* Molly Holland and Secretaries of the State Societies. *Projects*: Troy Carter, *Chairman;* William E. Bacon, Allen Ford, and Presidents of State Societies. *History*: Lillian Price, *Chairman;* I. Thomas Reamer, Albert Lauve, Evelyn Peacock, and Johnnie Crotwell Beck. *Board of Canvassers:* C. J. Vance, Howard Clem and Mary Lancaster.

Jack Kirkland *Perry Cox* *James Mitchener*

Delegates to the Annual Meeting of the American Society of Hospital Pharmacists and the Convention of the American Pharmaceutical Association are Mary Lancaster and William W. Taylor with Grover C. Bowles and Lillian Price serving as alternates.

The 1959 meeting of the Southeastern Society will be held in Atlanta, Ga.

Western New York Chapter

Members of the Western New York Chapter of the ASHP met for the final meeting of the year at the Niagara Manor. Thirty-one members and guests were present. Officers elected for the coming year include *President,* Mrs. Patricia Rieman; *Vice-President,* Henry Kramp; *Treasurer,* James Speciale; *Recording Secretary,* Joanne Miller; and *Corresponding Secretary,* Charles E. Hoff.

Oregon Society

Members of the Oregon Society of Hospital Pharmacists met at Salem Memorial Hospital in Salem on May 14. Included on the program was a report on the A.Ph.A. Convention and the ASHP Annual Meeting by Miss Gloria Ardueser. Other business included announcement of a course in radioisotopes and an invitation to a Pharmacy Seminar on October 11 to be sponsored jointly by the Washington State Hospital Pharmacists and Pfizer Laboratories.

The Society adopted a resolution commending Yoshio Inahara, an associate member, for his work in planning and executing the pharmacy display at the recent Health Fair in Portland.

New officers of the Oregon Society elected to serve during the coming year include *President,* Robert C. Resare; *Vice-President,* Alma Robertson; and *Secretary,* Barbara Christensen.

Akron Area Society

The principal speaker for the May 13 meeting of the Akron Area Society of Hospital Pharmacists was Mr. Joseph Kuczynski, Agent in Charge, Bureau of Narcotics, Cleveland. The meeting was held at the Ohio Valley Hospital in Steubenville with eleven members and two guests present.

Business transacted during the meeting included consideration of proposed amendments to the Constitution and By-Laws and election of new officers.

Officers elected to serve the Akron Area Society during the coming year include *President,* Irene Knepp; *Vice-President,* Paul Dickerson; *Secretary,* Robert P. Baird; and *Treasurer,* Margarete Acebo.

Ohio Society

The Ohio Society of Hospital Pharmacists has published a newsletter (Vol. 2, issue 2, June 1958) listing the chairmen, committees, the total membership list, activities of other groups in Ohio, and the report of the Committee on Special Projects of the O.S.H.P.

Also, in a letter from President Jack Smittle, the goals for the coming year are outlined. These include membership activities, a study of the Constitution and By-Laws, establishment of affiliation with the Ohio State Pharmaceutical Association, and a study in the proposed changes in state apprenticeship law.

Massachusetts Society

Mr. Louis P. Jeffrey, Pharmacist-in-Chief at the Albany Hospital in Albany, N. Y., was the principal speaker at the May 21 meeting of the Massachusetts Society of Hospital Pharmacists. Mr. Jeffrey is also President of the Northeastern New York Society of Hospital Pharmacists and a member of the ASHP Executive Committee. He spoke on "Control of Drug Samples."

Included also on the program was a report on the A.Ph.A. Convention and the ASHP Annual Meeting which were held in Los Angeles in April. The report was presented by Mrs. Ethel Pierce who was the delegate from the Massachusetts Society.

The meeting was held at the Brewer plant in Worcester, Mass.

Oklahoma Society

The May meeting of the Oklahoma Society of Hospital Pharmacists was held in conjunction with the Annual Convention of the Oklahoma State Pharmaceutical Association. A luncheon was held at the Skirvin Hotel in Oklahoma City on May 14. Among the guests in attendance included Dean Ralph W. Clark of the University of Oklahoma, Dean Walter Strother of Southwestern State College of Pharmacy, Mr. E. Burns Geiger of Pfizer Laboratories and Mr. Gerald Nutter, President of the American College of Apothecaries.

Following the luncheon Mr. Adelbert E. Briggs of the U.S. Public Health Service Indian Hospitals and delegate to the ASHP Annual Meeting, presented a detailed report on the proceedings of the ASHP Meeting. Also, Mr. E. Burns Geiger addressed the group.

The June 10 meeting of the Oklahoma Society was held at St. Anthony Hospital in Oklahoma City. President Robert C. Bogash was the guest speaker and addressed the group on "What is Ahead for Hospital Pharmacy."

Houston Area Society

The Houston Area Society of Hospital Pharmacists honored President Robert C. Bogash with a dinner at the Faculty House at the University of Texas—Medical Branch, Galveston on June 8, 1958. Beginning the program at 3 P.M., members of the Houston Area Society were given an opportunity to tour the Medical Center and the group was entertained at a buffet dinner given by the Eli Lilly Company.

With Robert L. Lantos, President of the Houston Area Society, presiding, greetings were presented by Richard Williamson, President of the Galveston County Pharmaceutical Association and Richard Foster, Assistant Director of the University of Texas Medical Branch Hospitals. Reports were received on the Annual Meeting of the ASHP and the Convention of the A.Ph.A. and the principal address was presented by Robert C. Bogash.

Michigan Society

The Michigan Society of Hospital Pharmacists held its Annual Dinner Meeting on May 23 under the sponsorship of Parke, Davis and Company. The dinner was held at the Sheraton-Cadillac Hotel in Detroit. Newly elected officers for the 1958-1959 year were introduced including Edward Superstine, *President;* Harry Lang, *Vice-President;* Arthur Jozefczyk, *Treasurer;* Patricia Allen, *Recording Secretary;* and Mildred Das, *Corresponding Secretary.*

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Southern California Society

Fifty members and guests were present for the May 14 meeting of the Southern California Society of Hospital Pharmacists held at the Daniel Freeman Hospital. Miss Florence Martin, Chief Pharmacist, introduced Sister Ann Lucy, Administrator of Daniel Freeman Hospital, who welcomed the group and gave a brief history of the institution. The principal speaker for the meeting was Dr. Saul Heiser, Radiologist at the Daniel Freeman Hospital. He spoke on "Current Radiation—Its Application and Problems."

The business meeting included reports on the A.Ph.A. Convention, plans for membership activities, participation in career day programs in high schools, and revision of the Constitution and By-Laws.

The Southern California Society met in Amigos Hall at Rancho Los Amigos in Downey, California for the June 11 meeting. Mr. David Odell, Assistant Director of the hospital gave the Society a warm welcome and a brief description of the hospital and its functions. Rancho Los Amigos is one of Los Angeles County's six county hospitals, with a bed capacity of 2500 plus 300 beds for rehabilitation and intensive treatment and geriatric restoration. The chief pharmacist at Rancho Los Amigos Hospital, Mr. Victor Reddick, was introduced.

The principal speaker for the meeting was Dr. Homer Conparette, Assistant Medical Director at the hospital. His subject, "Medical Problems of Geriatric Patients," was presented in an interesting and informative manner.

Included also on the program was a report on "Temaril" by Mr. Andrew Cannellus, a pharmacy student, and a general report on "Megamide" by Mr. Robert Megredy, also a pharmacy student.

During the business session, the Society approved the following two amendments to the Constitution:

1. Student members may be elected from individuals enrolled in a recognized School of Pharmacy and who are especially interested in the field of hospital pharmacy.

Student membership dues shall be $2.50 per year, payable on the first of the year.

2. The Finance Committee shall consist of the following officers: The President, Secretary, and the Treasurer who may without further action pass on all accounts or appropriations not exceeding twenty-five ($25.00) dollars. Larger amounts are to be discussed by the executive board and brought before the membership for action.

Western Pennsylvania Society

A business meeting of the Western Pennsylvania Society of Hospital Pharmacists was held on Wednesday evening, June 4, at Mercy Hospital in Pittsburgh.

Arrangements for the Annual Fall Seminar were discussed and it was decided that the Seminar will be held on October 22 beginning at 1:00 P.M. with a session at the Carlton House Hotel followed by a buffet lunch. The group will then proceed to Mercy Hospital for the evening session.

Plans are being made to sponsor a joint meeting with the Allegheny County Pharmaceutical Association in November.

A report of the Membership Committee disclosed that eighteen new members have been enrolled since January of 1958. It was also proposed by the Membership Committee that the Constitution be amended to include a new class of members—students of the two local Schools of Pharmacy interested in hospital pharmacy. They will be designated as "Student Members" with a reduced fee for membership. Student applications will be accepted by Dr. John Ruggiero of Duquesne University and Dr. John Boenigk of the University of Pittsburgh beginning in September.

Current projects were also discussed and include the establishment of a Poison Control Center in Pittsburgh by the Society and the publication of a quarterly Bulletin by the local chapter.

Colored slides taken during the Los Angeles Convention were shown by Regis Kenna and President Gerard Wolf at the conclusion of the meeting.

Hospital Pharmacists of Greater Kansas City

The Society of Hospital Pharmacists of Greater Kansas City heard representatives of the Kansas City Police Department speak on "Criminal Abuse of Narcotics," at the May 14 meeting held at the Blue Cross-Blue Shield Building.

Also included on the program was a report on the Annual Meeting of the ASHP by Sister Joseph Marie, delegate from the Greater Kansas City group. Of particular interest to the members are the American Hospital Formulary Service and the plans for recruiting new members in the Society.

Colorado Society

Among the objectives of the Colorado Society of Hospital Pharmacists are to sponsor legislation to the effect that the services of a pharmacist will be required in every hospital, nursing home, and clinic where medicines are dispensed; to provide for a hospital pharmacist on the Board of Pharmacy; and to improve the education and training of hospital pharmacists.

At the March 18 meeting of the group, held at the National Jewish Hospital in Denver, a request from the Board of Pharmacy asking for recommendations regarding the regulation prohibiting the return of unused medications and drug items for credit was discussed. The Society suggested that the term "premises" be so defined as to allow return of medications which were not actually in the patients' rooms. Later, at the April meeting, the members were informed that the Board of Pharmacy had ruled that medications can be returned in the hospital under professional supervision, appointed by the administrator.

Plans for a Hospital Pharmacy Seminar to be held Saturday, October 18, at the University were discussed at the meeting held April 15 at Denver General Hospital. The Planning Committee for the Seminar includes Samuel Kohan, President C.S.H.P. who serves as Chairman, Messers La Nier and Friesen, and Drs. Henning and Harkness of the University Faculty. The Seminar will deal primarily with pharmacy problems of small hospitals and how they can be solved. All hospital administrators in the state will be invited to the Seminar which is to be sponsored by Pfizer Laboratories.

President Samuel Kohan led a discussion on "The Pharmaceutical Representative and You" at the March meeting and Dr. Samuel Johnson, Director of the Poison Control Center of Denver, spoke on "How Hospital Pharmacists Can Help With Poison Control."

Northeastern New York Society

Sister Mary Gonzales Duffy, Director, Pharmacy Service, Mercy Hospital, Pittsburgh, Pa., was the principal speaker at the May 27 meeting of the Northeastern New York Society of Hospital Pharmacists. Sister Gonzales spoke on the "Preparation of Small and Large Volume Parenterals." The talk was supplemented by an exhibit of new equipment which was demonstrated by Mr. Dan Cronin, Jr., Sales Manager of The MacBick Company.

The meeting was held at McAuley Hall, St. Peter's Hospital, Albany.

CASE HISTORY #231

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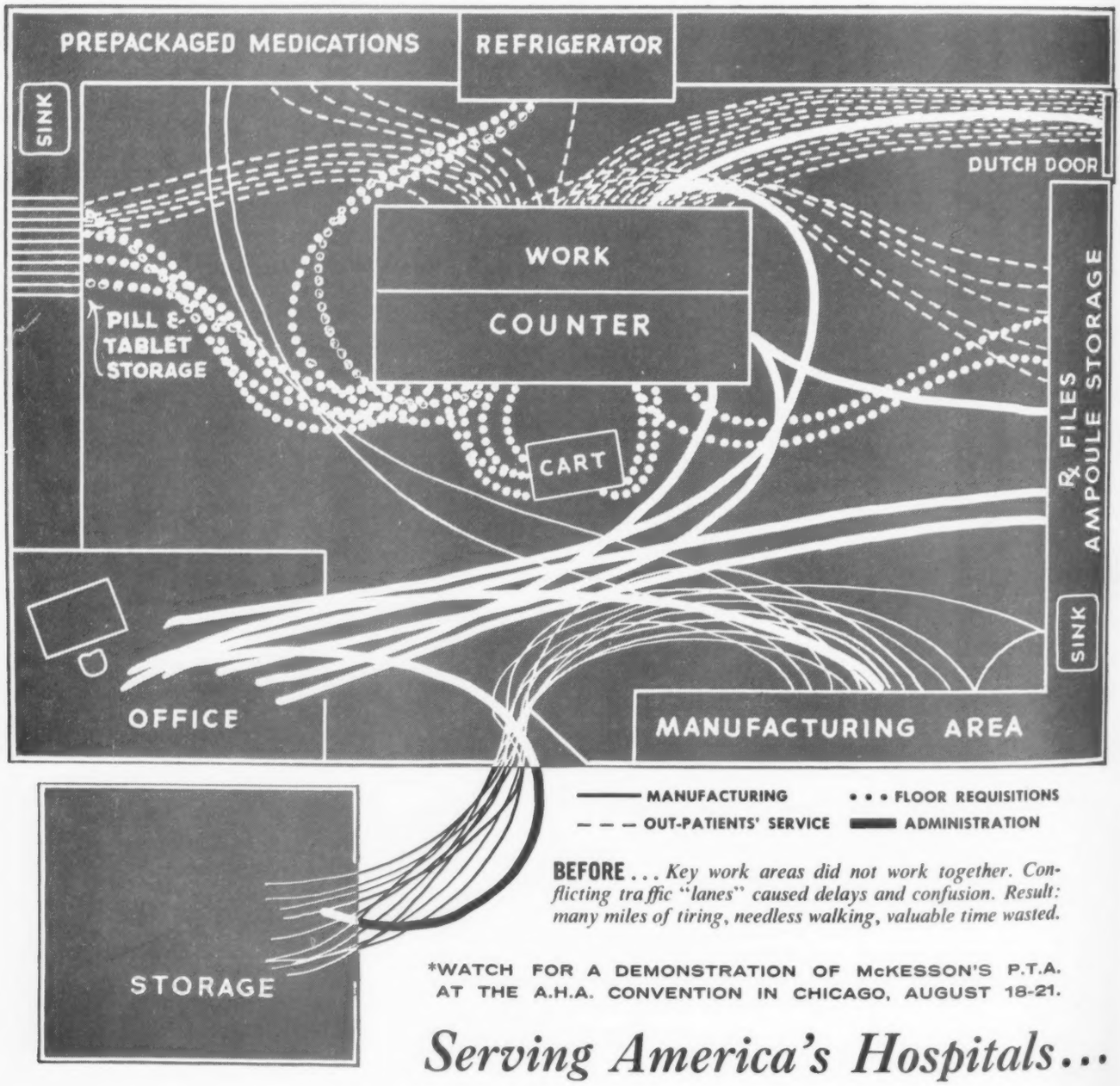

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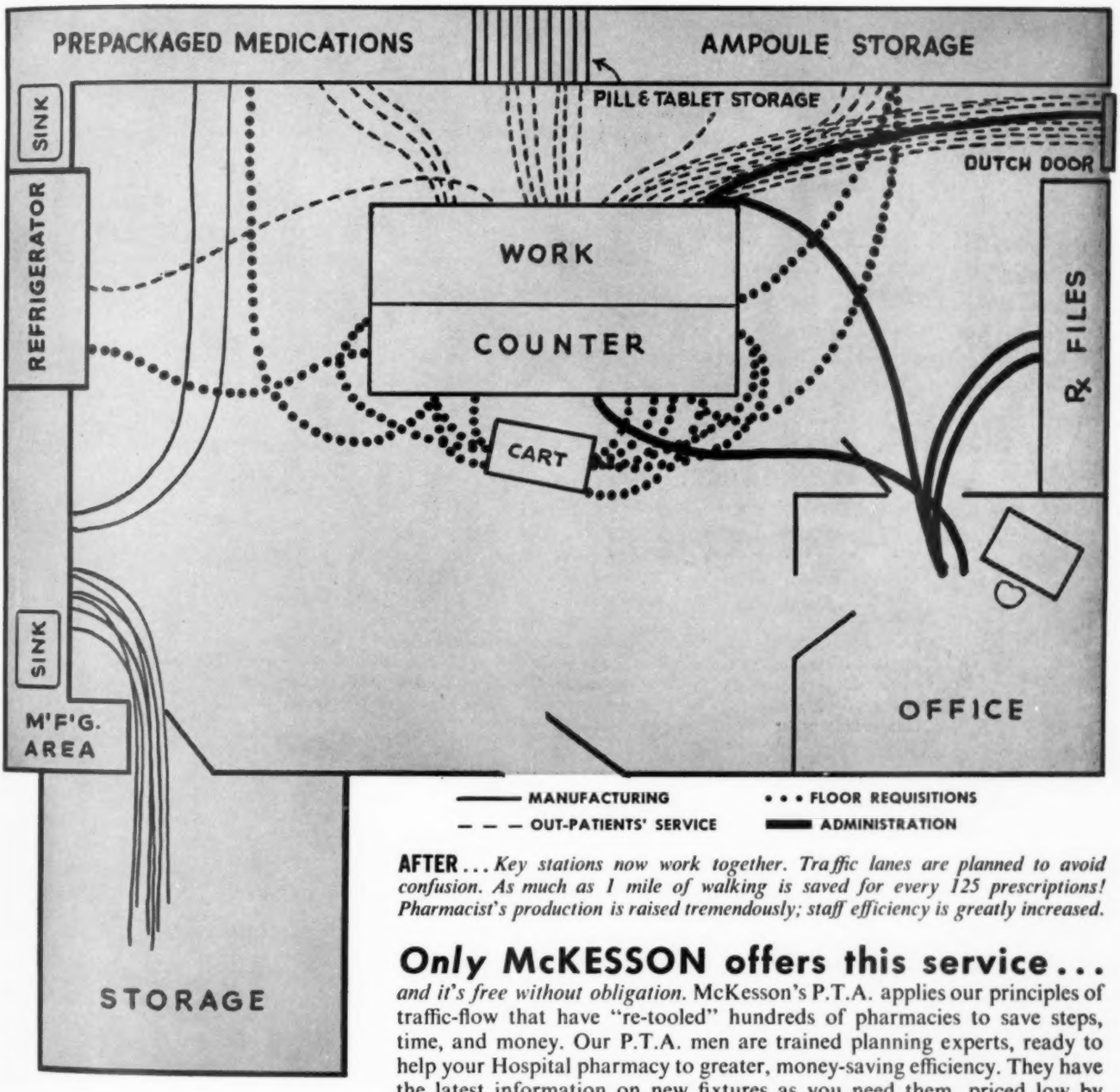

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1. *Holden, W. D.; Krieger, H.; Lesey, S., and Abbott, W. E.: Ann. Surg. 146:563 (Oct.) 1957.*
2. *Elman, R.: J. Am. Dietet. Assoc. 32:534 (June) 1956.*

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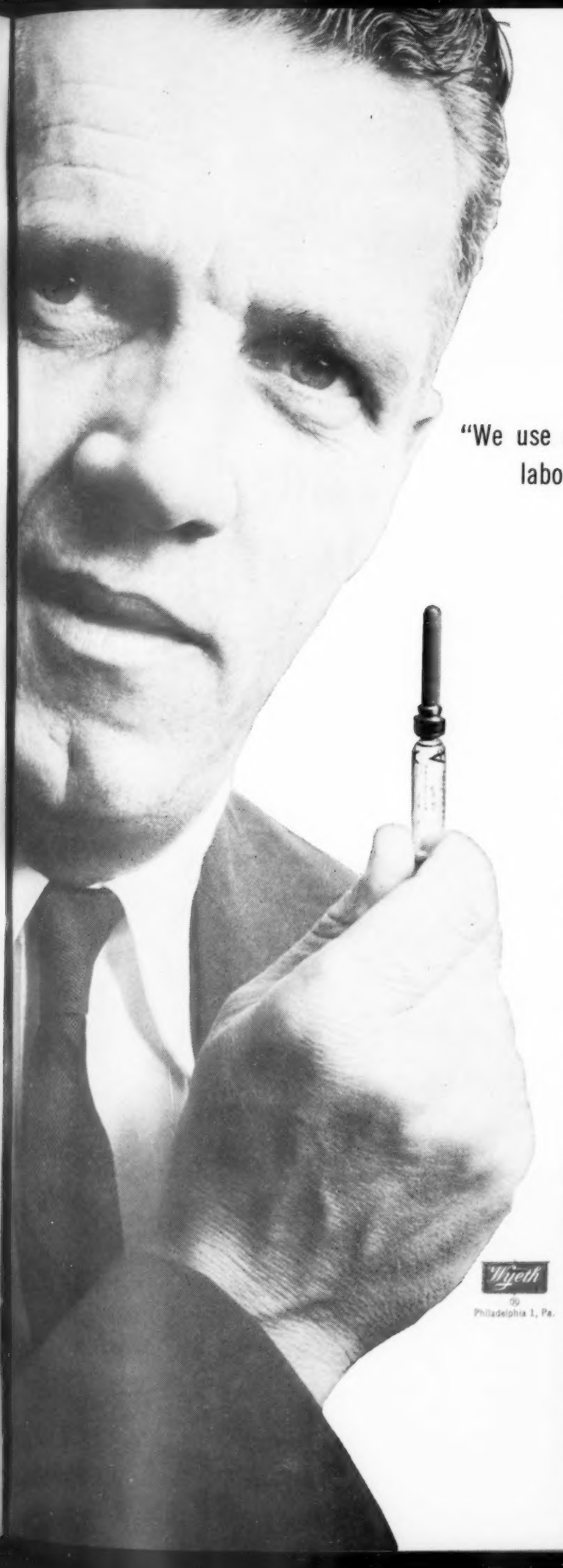

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1. Hunter, J.A., et al.: Hosp. Management 81:82 (March) 1956, 81:80 (April) 1956, 83:86 (March) 1957. Reprints are available from your Wyeth Territory Manager or write Wyeth, P.O. Box 8299, Philadelphia 1, Pa.

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Now everybody's talking...

about... *closer control of cross infection in every part of the hospital*

Wider recognition of the current problem of hospital-acquired infections is focusing new attention on ways and means of reducing this hazard to good patient care. Hospital and medical society meetings—and hospital, medical and surgical journals—are daily shedding new light on the varied aspects of the overall problem.

In many hospitals, a special "committee on cross infection" has been appointed to review practices and procedures. In others, each department head is studying closely his or her own methods of operation. Few hospitals exist which are not giving some special thought to this highly current problem.

Out of this critical evaluation has grown an awareness that environmental asepsis is a major weapon for cutting cross infection to a minimum. Application of continuous disinfection procedures from operating rooms through food service and laundry areas can be the means to changing the hospital's entire experience with hospital-acquired respiratory, intestinal, urinary or post-operative wound infections.

Take floors, for instance

Floors offer a great opportunity for furthering the spread of infection. Microorganisms settling to the floor are redispersed on dust particles or tracked through the hospital on shoes. Walls and ceilings as well can be reservoirs of potential infection. Lehn & Fink disinfectants not only kill all the most common pathogens on contact but are continuously active against new contaminants touching the disinfected surface for as long as a week later.

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Lehn & Fink disinfectants have many applications here. Among them: mopping floors; cleaning grills, ducts, and coils of air conditioners; as standard equipment on the scrub-up cart; as a germicidal dip to remove gross contamination from gloves before their removal; to gather instruments into enroute to sterilizer.

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CARL E. BECK, *Pharmacist*
Central Baptist Hospital
Lexington, Kentucky

DEAR SIRS: Immediately upon receipt of the JOURNAL, I turned to and read the excellent article on the Formulary Service. Here is the successful culmination of a tremendous undertaking. All concerned are to be congratulated!

. . . We find the new format of the JOURNAL very pleasing. It has always been a publication that we take pride in showing to other department heads and our friends. With the new name and new format, our pride is justifiably greater.

GUY T. KELLY, JR., *Chief Pharmacist*
Methodist Hospital of Dallas
Dallas, Texas

Appreciates Journal

DEAR SIRS: . . . we, as a body, express our pleasure and satisfaction with the "new look" of our monthly publication, the AMERICAN JOURNAL OF HOSPITAL PHARMACY. We all agree that the publication cover is not only artistic but very precise and professional. We are indeed proud to belong to an association professing such inspiring and noble ideals.

SISTER M. ROSE DOMINIC, O.P., *Corresponding Secretary*
Greater New York Chapter of the ASHP
St. Catherine's Hospital
Brooklyn, New York

DEAR SIRS: I have been eagerly awaiting the notice concerning the American Hospital Formulary Service. My Administrator and Therapeutics Committee are very much impressed with the possibilities of a loose leaf continuous formulary service. . . .

GEORGE A. WRIGHT, *Chief Pharmacist*
Evangelical Deaconess Hospital
Milwaukee 3, Wisconsin

Appreciates Service from Division

DEAR SIRS: We appreciate the assistance you have given us in helping us locate an Assistant Staff Pharmacist . . .

EMMA R. GUSTAFSON, *Director of Personnel*
The Greenwich Hospital Association
Greenwich, Connecticut

Appreciation from Pfizer

DEAR SIRS: I have recently had an opportunity to read your letter dated May 20 advising us of a resolution passed at your recent meeting in Los Angeles.

The thoughtfulness of your members in commenting favorably on our contribution to the Hospital Pharmacy Seminar Program of your affiliated chapters is appreciated.

It is always a pleasure to work with groups interested in patient care and it is doubly rewarding when we can contribute to the educational aspects of any of the various health professions.

Thank you for writing and I trust you will express our appreciation to your members.

J. J. VAN GASSE, M.D., *General Manager*
Pfizer Laboratories
Brooklyn, New York

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editorial

by DON E. FRANCKE

Organizational Needs of the Society II.

► ADVANTAGES OF CHANGING THE METHOD OF SELECTION and terms of office of members of the SOCIETY's Executive Committee were discussed in the July issue of the JOURNAL. In this discussion it was pointed out that the present organizational structure of the ASHP is based upon three interrelated groups, namely, (1) the membership, (2) a central governing body known as the Executive Committee, and (3) a House of Delegates in which each ASHP Affiliated Chapter is represented.

Although the ASHP has had affiliated chapters since its inception, it was not until 1949 that representation for these organizations was provided through a House of Delegates. At present, 49 Affiliated Chapters with approximately 51 delegates have representation. Additional members of the House of Delegates are the 10 members of the Executive Committee and the chairmen of special committees, the number of which varies from year to year but is usually about 10.

The purpose of the House of Delegates, as now stated in the By-Laws, is threefold: (1) to assist the Executive Committee in the formulation of policy by discussing and recommending action on new proposals, amendments to the Constitution and By-Laws, and items of a controversial nature; (2) to elect the Secretary of the SOCIETY; and (3) to receive reports on the activities of each Affiliated Chapter together with their recommendations to the national SOCIETY. Thus, as now organized, the House of Delegates is primarily an advisory body; its only power is to elect the Secretary, whose name is placed in nomination by the Executive Committee.

Everyone agrees that the Affiliated Chapters, which hold a large majority in the House of Delegates, are of the greatest importance to the ASHP. The 49 local and regional chapters form the sinews of the SOCIETY and its members are the sparks which ignite the driving power of the national organization. Almost everyone agrees that the Affiliated Chapters, through the House of Delegates, should be given an opportunity for greater participation in ASHP affairs. Some believe that the ASHP House of Delegates, like those of the American Medical Association, the American Hospital Association and others, should be the overall policy-making body with authority to issue mandates to the Executive Committee. They emphasize that such a system of representative government is well accepted and would best reflect the interests of the affiliated groups to which approximately 65 percent of ASHP members belong.

Others believe that the SOCIETY is best served by retaining the present direct control of policy by the vote of the members who attend annual meetings, including members of the House of Delegates representing Affiliated Chapters, and by direct vote of the active membership in election of officers and alterations in the Constitution. They also point to three weaknesses in the delegate system: (1) delegates are selected often merely because they happen to be planning to attend a national meeting and not necessarily because of their activity, interests, or contributions in the affairs of the local society, (2) a different delegate is sent each year by many chapters and under this system the delegate never has an opportunity to follow closely the activities of the ASHP from one meeting to the next, and (3) usually, only two-thirds of the Chapters are represented by delegates at the annual meetings.

To make the House of Delegates, and thus the Affiliated Chapters, more active in the affairs of the SOCIETY it has been suggested that (1) the standing and special committees of the ASHP should present their reports to the House of Delegates, and (2) the House of Delegates should pass resolutions, subject to final review and approval by the membership at the final general session of the annual meeting. This would make the House of Delegates a much more active group and still maintain the principle that final authority should rest with the total membership in attendance at the annual meeting.

If this suggestion is adopted, it well be necessary to provide more time for meetings of the House of Delegates and will fundamentally affect arrangement of the program at the annual convention. A plan similar to the following would be necessary:

Sunday P.M.—
House of Delegates, Committee Reports.
Monday A.M.—
General Membership Meeting, Presentation of Papers.
Monday P.M.—
General Membership Meeting, Presentation of Papers.
Tuesday A.M.—
House of Delegates, Committee Reports and Resolutions.
Tuesday P.M.—
General Membership Meeting, Review of Resolutions and Actions Taken by the House of Delegates.

NEW PATTERNS
of hospital pharmacy service

GROVER C. BOWLES

► AS I LOOK AROUND AND SEE ALL THE EXPERTS on hospital pharmacy seated in this room, I feel somewhat as Mr. Bevan, the Labor leader in the British House of Commons, must have felt when he was speaking on a highly controversial issue, and began by saying, "When I consider all the things I ought not to say and all the ground I should not put my awkward feet on, I am not quite certain what territory is open to me at all." So despite the delicate ground on which I should tread, I am happy to have this opportunity to discuss with you briefly the "New Patterns of Hospital Pharmacy Service" as I have observed them in my travels.

Growth

The continued growth and expansion of hospitals since World War II has far surpassed all estimates. For some time now, we have been told that hospitals constitute the nation's fifth largest industry. The total assets of all hospitals now amount to more than 13 billion dollars, with the total expenditures exceeding 6 billion dollars in 1956. It is said that two out of every one hundred job holders in the United States are employed by hospitals.

Yet, the expansion of hospitals facilities must continue if we are to take care of the increasing population which exceeded 172,800,000 people last year. The Census Bureau reports that there was a birth every 7½ seconds during 1957, a death every 20 seconds, and an immigrant arriving every two minutes and an emigrant leaving every 20 minutes. If you juggle these figures long enough, you will find that the population scored a net gain every 11 seconds during 1957. The present population forecast for our country is: by 1960—176,000,000 by 1970—198,000,000 and by 1980—220,000,000. Thus hospitals must continue to grow at a rapid rate just to stay where we are.

Broader Concepts of Pharmacy

Hospital pharmacists, and I am speaking of all of us, must recognize the need for a broader concept of pharmacy responsibilities if we are to keep pace with the growth and development of the other health services.

Only casual observation will reveal that there will be an increased demand for pharmaceutical service—both quantitative and qualitative. This is true in the pharmacy service rendered to patients in the hospital as well as in the expansion of ambulatory care for indigent as well as for paying patients. Even greater demands will be experienced in the quality and quantity of pharmaceutical services supplied to the other departments of the expanding hospital. Recovery rooms, premature nurseries, eye banks, bone banks, aorta banks, cardio-pulmonary centers, and constantly expanding clinical and research laboratories are commonplace in hospitals today. With the addition of each new research, diagnostic and patient care area, new pharmaceutical problems are presented and hospital pharmacists must have the initiative and the ability to cope with these problems.

Although acetylsalicylic acid is still the most widely used drug in the world, the $110-120 million spent annually by the pharmaceutical industry and an equal or greater amount spent by the Federal government on medical and pharmaceutical research assure us that drug therapy will continue to move at a rapid pace. In fact, it is conceivable that the record of one new pharmaceutical preparation daily for the last ten years may even be broken.

It is important that the hospital pharmacist be capable of sifting out factual information from the ever-increasing amount of promotional material supplied by the pharmaceutical companies. In addition, he must have the ability to organize this material in such a manner that the professional staffs, including nursing, can be supplied with concise and accurate information about the many new therapeutic agents. Thus it becomes more necessary than ever before that the modern hospital pharmacist have a good command of the English language, both written and spoken, in addition to a thorough knowledge of physiology, biochemistry, pharmacology and microbiology.

Administrative and Professional Functions

As a whole, hospitals are now operating on a money-sound business basis. The days when the hospitals ended up each fiscal year in the red and went

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begging to the community to make up the deficit is becoming a thing of the past. Professionally trained hospital administrators are now operating hospitals on sound business principles. They expect that department heads and particularly those responsible for the management of important revenue-producing departments will be skilled in administrative functions. Pharmacists must recognize that to advance in hospital pharmacy they will be expected to perform both in their professional capacity as pharmacists and to use administrative skills well. A good chief pharmacist is frequently more valuable for his ability to plan and to get things done through others than for his ability as a pharmacist. We will need to learn more about budgets, cost accounting, cost allocation, inventory control, and efficient management of personnel. Many of us will be expected to absorb additional administrative functions.

In a number of hospitals, particularly the smaller hospitals, additional administrative duties are being assigned to pharmacists. One hospital with which I am familiar will soon advance their chief pharmacist to assistant administrator and designate him as the director of supplies. He will be responsible for the pharmacy, central sterile supply, hospital storeroom, and purchasing. By assigning the supply responsibility to the pharmacist, these areas will be coordinated and significant economies will be effected. The pharmacist will have an interesting and challenging job and at a salary commensurate with his ability.

Hospital pharmacists must be capable of planning and carrying out cost studies dealing with the use of disposable gimmicks and sustained action dosage forms of drugs in order to determine if the claims of the supplier are accurate and if the patient's and the hospital's money would be more wisely spent on these items. The pharmacist who can plan and carry out these studies objectively will be asked to do so. Those who merely quote what the advertisement states will not be asked to express an opinion the second time.

Joint Commission and Pharmacy

Now let us turn to some areas that need our attention. We have all been greatly encouraged by the increasing emphasis on pharmacy practices by the Joint Commission on the Accreditation of Hospitals. Pharmacy is now an essential division of the hospital. Automatic stop orders on dangerous drugs are required. The Joint Commission is inquiring about the procedures used for investigational drugs in hospitals and the activities of the Pharmacy and Therapeutics Committee. Approximately one-half of Bulletin 16 of the Joint Commission dated December, 1957, was devoted to pharmacy. This alone indicates to me that the Joint Commission is more pharmacy conscious than ever before.

While at the present time the Joint Commission does not make the Pharmacy and Therapeutics Committee a mandatory committee, there is some reason to believe that this will be a requirement in the not too distant future. It would seem logical that the Pharmacy and Therapeutics Committee will grow in importance, eventually to be on a par with the Tissue Committee. Already some Pharmacy and Therapeutics Committees are reviewing drug reactions and are post-auditing medical records to determine the caliber of drug therapy used in their hospitals.

Strong Pharmacy and Therapeutics Committees

Most hospitals having a strong Pharmacy and Therapeutics Committee also have a hospital pharmacist that is doing a good job. In order to do a good job as secretary and spark plug of the Pharmacy and Therapeutics Committee, the pharmacist must be solidly grounded technically and know what constitutes rational drug therapy and must possess the initiative to stimulate the committee to act. A significant portion of our future strength lies in the proper development of the Pharmacy and Therapeutics Committee.

Radioactive Isotopes

The use of radioactive isotopes for diagnostic and therapeutic purposes has become routine in many hospitals. This is particularly true of radioactive iodine uptake in diagnostic and treatment procedures. Diagnostic and treatment studies using radioactive phosphorous, iron and chromium are not uncommon. In fact, studies of this type are now frequently done on an outpatient basis.

Now is the time for hospital pharmacists to equip themselves with the know-how to procure, store, and dispense radioactive materials. Unfortunately for most of us, this will mean enrolling in special courses which are offered by some of the colleges of pharmacy around the country. It is safe to predict that pharmacists who acquire this additional knowledge and ability to handle radioactive materials will be the ones asked to take on this responsibility as the use of these agents increases.

Manufacturing in Hospitals

Because of the lack of well-trained hospital pharmacists, salaries will continue to increase to the point that it will no longer be practical for pharmacists to prepare products which are commercially available. A possible exception may be sterile products. However, the need for the facilities to prepare dosage forms which are not currently available will more than justify adequately equipped pharmacy laboratories in most hospitals. Thinking hospital pharmacists will give a great deal of study to the problems involved before embarking on a large-scale manufacturing or bulk compounding program and will justify such a program only

on a realistic cost basis. It is my opinion that we will be hearing less and less about manufacturing in hospitals. Exceptions will be the large university teaching hospitals where teaching will justify their manufacturing program.

New Patterns of Distribution

Concern about medication errors will force us to give more thought to better packaging, labeling, and more progressive methods of distributing drugs. Pharmacy responsibility does not end when the drug leaves the pharmacy.

There is reason to believe that the hospital pharmacist will become more and more responsible for the replacement of pharmaceutical supplies on the patient floors, the operating room, delivery rooms, emergency departments, and clinics, thus conserving nursing time in the preparation of requisitions, and the checking and storing of supplies. It is not difficult to visualize a pharmacy on wheels with the elimination of all requisitions as a method of increasing the efficiency of distribution of drugs throughout the hospital.

Centralization of Medical Care

Group practice of medicine within the teamwork of hospitals and private practice clinics is a trend of major importance to the practice of pharmacy. Some hospitals have made space available to private physicians within the hospital buildings. In other hospitals, private offices or suites have been provided by the hospital with different physicians using the facilities at different hours and on different days sharing the same areas, receptionist, secretary, and other technical personnel.

In most instances, physicians whose offices are located in or near the hospital have the privilege of referring private ambulatory patients to the hospital clinical laboratory and radiology departments.

I was unable to find up-to-date figures on the number of hospitals having private physicians' offices. However, in 1953, the Administrators Guide of *Hospitals* reported that 18.6 percent of the hospitals reporting had some private physicians' offices in their buildings. X-ray facilities were available to private ambulatory patients in 75.9 percent of the hospitals and 74.2 percent reported that clinical laboratory facilities were available to private ambulatory patients. So far as I know, no figures are available on the number of hospitals providing pharmaceutical services to private ambulatory patients. Since medicine is an increasing matter of specialization, there is every reason to believe that we will see more group practice clinics located in or near hospitals. The position of the hospital pharmacist in this situation needs to be clearly defined and this is an area which needs our immediate study.

Clinic Pharmacies

During recent years clinic pharmacies have become an emotional football in our profession and I would wonder if some of the criticisms are justified. So long as there is no collusion between the pharmacist and the physician, and so long as the pharmacist is not exploited, what is objectionable about clinic pharmacies? Should not the pharmacist associated with these clinics be represented in our national pharmacy organizations? May I go a bit farther and ask: Do not these pharmacists have many problems similar to those of hospital pharmacists? I believe they do. I feel further that the SOCIETY should give serious consideration to encouraging pharmacists affiliated with clinics to become members of the ASHP.

Nursing Homes

The first conference on nursing homes and homes for the aged sponsored by the Public Health Service, held in Washington, D.C. in February 1958, reported that 325,000 additional beds are needed for nursing homes. This group also pointed up the sub-standard structures now in use and in general the sub-routine medical care available in these homes. Specifically this group recommended, "that a study be made to determine requirements of nursing homes and homes for the aged with relation to supply, availability, storage, dispensing, and supervision of administration of medication. This study should encompass consideration of providing medication for acute, chronic, and maintenance needs with due regard for legal and medical requirements." Further, the committee recommended, "that to more adequately meet the individual needs of patients in nursing homes and homes for the aged, established community agencies jointly undertake a plan whereby specialized professional services in the community are made available to patients in these facilities. Such services might be made available by voluntary and/or public agencies. These services should include pharmacy, occupational therapy, recreational therapy, physical therapy, social, nutritional, X-ray, laboratory and dental."

It is interesting to note that some authorities are predicting that small hospitals, those under 100 beds, are almost certain to disappear. Such predictions are based on the fact that hospital care has grown in complexity and requires equipment and highly trained personnel that cannot be provided in hospitals under 100 beds. If this prediction proves to be correct, one of the major problems confronting us today, that of providing adequate pharmaceutical service to small hospitals, will be greatly simplified and there will be even greater demands for hospital pharmacists.

Colleges of Pharmacy

Next, are the colleges and internships supplying an adequate number of qualified hospital pharmacists?

The answer is, of course, no! However, each year more and more pharmacy students become interested in hospital pharmacy despite the lack of encouragement they receive while in college. In the university medical centers, the pharmacy deans are showing a great deal more interest in hospital pharmacy. This is most encouraging. However, the problem is how to keep the dean interested without their taking over the direction of the hospital pharmacy. I fail to see the justification for appointing the dean of the college of pharmacy as director of the hospital pharmacy service. This will, in many cases, stifle initiative in the department and will prevent the hospital from attracting a well-trained aggressive department head. This is an area which deserves our attention and study.

Internships

For the most part, established internships are doing a good job; there are just not enough of them. There is also a considerable variance in the quality and quantity of training provided by the various internships available. The SOCIETY must give considerable thought to the effect of the five-year college program on internships and if the internship program is to continue, a practical accreditation program is mandatory.

My greatest disappointment in the job which the colleges and internships are doing is the almost complete lack of training for leadership that they provide. To date, most of our leaders in pharmacy were either born with the ability or have acquired it through years of experience. It is unfortunate indeed that more training for leadership is not provided for pharmacists in their formative years.

Relationships with Other Professions

What about our relationship with the other professions? If I were asked to compare our present relationships with the other members of the health team to that of ten years ago, I would say that things are looking up. On the whole, the hospital pharmacist has grown in prestige. He is accepted as a professional person and as an important member of the hospital team. This was not generally true ten years ago. The climate seems to be right for further progress in our relations with the other health professions. I personally expect to see our stock continue to go up so long as we continue to do a good job.

Formulary Concept

It appears to me that the formulary concept in one form or another is here to stay. I view the *American Hospital Formulary Service,* soon to be made available, as one of the most significant contributions by the AMERICAN SOCIETY OF HOSPITAL PHARMACISTS—second only to the publishing of *The Bulletin,* now the AMERICAN JOURNAL OF HOSPITAL PHARMACY. Because of the nature of the Formulary Service, hospitals throughout this country, Canada, and Latin America will find it indispensable. Undoubtedly the *American Hospital Formulary* will be also widely used as a textbook in schools of nursing and as a reference book for students, professional pharmacists, and practicing physicians.

In making the Formulary Service available, the SOCIETY is fulfilling a portion of its obligation as set forth in its objectives which deals with the improvement of pharmacy practice in hospitals. I sincerely believe that Formulary Service makes the SOCIETY's place among the professional organizations of the health field secure.

Audit of Pharmaceutical Service

Perhaps our greatest single limitation in hospital pharmacy has been the lack of ability to "see problems." Now that the Audit of Pharmaceutical Service in Hospitals is nearing completion, many problems may be pin pointed for the first time. On the other hand, we may be surprised to learn how much we already know about our problems. At any rate, we will have more factual information to work with than ever before. Without waiting to learn what the Audit reports will contain, I am willing to predict that much good will come from this study and that history will list the Audit among the major accomplishments in hospital pharmacy of this decade.

Actions Alone Speak

While dramatic progress has been made in the practice of pharmacy in hospitals, let us not forget that much remains to be done. Let us not be carried away by the smooth talker. Remember that many of us are guilty of talking a good fight but what we do is the important thing. I can see nothing but progress ahead for hospital pharmacy. A recent survey by the American Hospital Association showed that about half of the country's hospitals need modernizing. Projected cost of needed improvements amount to approximately one billion dollars.

In January and February, the Hill-Burton program appeared to be a target of the administration's budget cutters. More recently hospital construction and renovation programs are being suggested by members of Congress as anti-recession measures. It is safe to predict that hospitals will continue to grow and that progress in the next decade will far surpass that which we have already witnessed. The fact is probably the most thrilling and challenging aspect of being in hospital work.

the hospital pharmacist as instructor of pharmacology in the nursing educational program

by SISTER M. GONZALES *and* GERARD WOLF

► THIS PROJECT WAS INITIATED TO SUPPLY A LOCAL NEED. We regretted to see one hospital pharmacist after another decline to accept the position of instructor of pharmacology in the schools of nursing attached to their hospitals. But in no instance did the pharmacist refuse because he felt he did not know the subject matter. In fact, one admitted that she probably knew more about pharmacology than the instructor who had been teaching it, and that she had, in some instances, supplied the former instructor with the latest pharmaceutical literature and had given her help and information on the less recent drugs. But to teach the subject was a problem. They affirmed that they didn't like to teach. They didn't know how to go about it. They had at the time, too much to do. But the most frequent excuse was, "I've never done any teaching—I wouldn't

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know the first thing to do." Thus, it was decided to provide a few notes to guide those willing to try as well as to convince those unwilling that they are the losers by their refusal to assume the task of teaching.

Hospital Pharmacist As Teacher Of Pharmacology

To convince reluctant pharmacists that they should be willing to assume the teaching of pharmacology in the nursing educational program we listed the following points:

1. There is a shortage of trained, competent teachers of pharmacology.

2. Teaching increases the value of one's services to the hospital.

3. Since the pharmacist purchases the drugs and interviews the pharmaceutical representatives, he is constantly in touch with what is new in the field together with the new trends in medicine.

4. He sees the whole picture of drugs in the hospital, namely, as to what is being used as well as what is no longer in demand; therefore, he knows what is important and unimportant for the nurse to know.

5. In teaching the nurses he makes their acquaintance; therefore, he knows each new group as it passes through the school of nursing. The advantage of knowing all the girls by name and being aware of their capabilities serves him in many circumstances when he has later dealings with them as graduate nurses.

6. It affords an excellent opportunity to orientate the student nurses to policies and procedures of the pharmacy, such as:
   a. Narcotic and barbiturate control
   b. Automatic stop orders
   c. Methods for handling investigational drugs
   d. Methods for requisitioning drugs
   e. Emergency drawer medications
   f. How to use pharmacy services to the highest benefit
   g. How to use the hospital formulary

7. Presuming of course, that he does a good job of teaching the nurses, they will always look up to him as a dependable pharmacist and have respect for his word.

8. Furthermore, if he has not only taught them well but also convinced them that he is interested in their needs and willing to help them when he can, he has acquired a group of loyal friends and ardent supporters. When occasions arise that he might have to inconvenience a nurse, or he may want to make some needed changes in procedure, his former students frequently smooth the way.

9. His area for doing good is greatly enlarged. Students admire and imitate a competent leader. If he goes before them, well-groomed and prepared to deliver an interesting lecture, he will steer them to clear thinking, and will be richly rewarded by the end results.

10. Admitting the task is time-consuming, one finds several personal gains tucked away behind all the work.
    a. Prestige
    b. Job satisfaction
    c. Salary increase
    d. Justification for employing additional members on the pharmacy staff.
    e. Presenting the subject always improves the instructor by both increasing his knowledge of the subject and improving his ability to speak before groups.
    f. Social advantages accrue from his status of being a member of a faculty, particularly if it is a college or a university group.

Textbook

A senior and experienced teacher once told me never to change texts the first time I taught a new course. He advised me to keep the text already in use; but while following it, to refer to other available texts. As one prepares lecture by lecture the text in use can be checked with the others. In this manner a review of the major parts of other texts prepares one for a wise choice. Often one perceives that the text in use is the best. Furthermore, newly revised texts might have the advantage of having emphasis on all the newer drugs without the clear presentation of them. The latest text released may, however, be the best if it embodies the points that make for clear presentation. Once the text is chosen, follow it. If there is one complaint that is common among students, it is that instructors put one text into their hands but teach from another. Such method requires the student to take voluminous notes. The instructor not only should follow the text but also read from it to the class. They should follow the reading and underline any particularly valuable sentence. This method will serve as a guide when they are reviewing.

There is one old text on the shelf of our Pharmacy that is priceless. It has marginal notes on the national board questions asked in former years. The question holds a place opposite the line of text that answers it. Each time national examinations are

administered it is well to discuss them with the nurses when they return to the hospital and to jot down the questions they ask you about, marking them in the text. In a short time a valuable book has been compiled. One more caution about the text. Rarely does one have sufficient time to cover the entire book, a fact of which students should be reminded while encouraging them to refer to their texts in both later courses and in writing care studies.

One successful method, however, of covering the entire text is to meet the other instructors to discuss with them the sections of the subject matter that occur in their courses; then the instructors should teach it from the pharmacology text; or if they are unwilling to do this, at least, they should be urged to cover all that the text presents on the matter. At one such meeting, we discovered that four different courses were presenting vitamins; two instructors were covering local anti-infectives; three were teaching the use and types of insulin; apparently the only matter that was being taught in the pharmacology course, without duplication in some other field, was the use and action of narcotics and sedatives. After several such meetings in which we allotted special areas to special courses, we finished with an easier task on our hands.

Reference Books

The official books and other standard drug references should be brought into class, together with the formulary. The class should examine them; later questions should be assigned that can be answered by consulting these texts only. This is sound advice because it will save much time later. When former students come for information the instructor can always recommend a well-known reference book with which he knows the inquirers are familiar. This information offers considerable help when they are preparing for a ward conference or writing a care study.

Preparing For Each Lecture

Prepare a file on the teaching units. Allot two folders to each unit. Folder I. should contain the notes, special definitions, page references, and bibliography; in fact, any material that one desires to have before him other than the text while he is teaching. Facts that one has on his finger tips the day he teaches them may be forgotten when it comes time to reteach them. The instructor should jot them down in a definite place, such as the folder that refers to that unit. Here, too, are kept the old quizzes that refer to that particular unit. Preparing a good quiz is time-consuming. Questions are easily lost if left loose in a note book. Also in this first folder a list of the films which one should like to show is kept. The

arrangement for the dates to show these films should be made early in the course. Many films have long waiting lists.

Folder II. holds all the literature, pharmaceutical brochures and advertisements that are helpful in teaching any particular unit. Articles, reprints, and illustrations that one has collected fit in here. They may be teaching aides, copies of which one may request from the manufacturers when the course is taught. Companies are always willing to supply such pieces in numbers sufficient for the entire class. The instructor should mark that piece to show it to the representative when he calls so that he may order additional ones for the class. This folder system is far more practical than a note book which is inadequate to hold all the material needed. The file system for each unit has the further advantage of having materials ready to hand to others in case one cannot meet the class that day.

Now, in case one decides to examine the file system for the course, he should not try to handle it all at one time. This system lends itself well to a long-term project and works out better that way. But it is a good idea to have all the folders prepared and placed in the file; then as materials and ideas come along one has the proper place to put them.

Contents Of The Course

As we mentioned above, it is advisable to follow the text in its simplicity. Nurses are neither physicians nor pharmacists nor pharmacologists. Although this is a debatable subject, the authors believe that the course is *basic* pharmacology and should be kept as such. There is no need for the nurse to know the malonic ester synthesis, or the chemical action of ammonium chloride in the system. Many teachers disagree here, but perhaps they teach in the states that allot seventy-five hours to the subject. In Pennsylvania and Ohio, the course must be done in thirty to forty-five hours; hence it must be kept as a basic course. If one follows a general outline for each drug, the nurse soon perceives the pattern and can acquire a sizeable knowledge on many drugs.

We have the following outline:

1. Non-proprietary name
2. Frequently used proprietary names
3. Classification
4. Action
5. Uses
6. Dose
7. Side effects and/or toxicity
8. Antidotes

Of course, there are several major areas when the pattern is not followed, but it serves as a useful guide in many units. But simplicity and clarity are the keynotes.

Examinations

The newer type of examination that includes so many questions of situation as well as multiple choice questions requires hours of time and labor to prepare. However, they are by far the better type as the subject matter is more adequately covered; they produce a fairer estimation of the pupil's ability, and are also much easier to grade. Our policy is to make the preparation of these examinations another long-term project. The authors keep a 3 x 5 card index. When a good idea arises for an examination question, they write it up. Often these ideas for situation-type questions conform to actual cases found in the hospital. In the process of preparing lectures, good ideas will arise which should be put on a card. This action will prevent the possibility of forgetting them by the time one sits down to prepare the examination. Quizzes and examinations should be teaching aids and should be reviewed with the class, reteaching the most-missed questions. The questions which students fail should be asked the same student later.

Oral quiz and blackboard work are of inestimable value. Drills on the blackboard afford the opportunity to see errors in spelling and incorrect answers which then can be corrected. They will not plague the instructor later as he corrects the examination papers. An excellent way for the teacher to learn the students' names is to have them write their names on the board before they begin to work; then, while they are working the names of the students becomes fixed in the mind. The following is a good blackboard drill that we have found helpful. The student is asked to write first the names of the dictated brand names; these are corrected for spelling. Then they are required to supply the following information about each drug: non-proprietory name, dose, and classification. When these are corrected, ask a few oral questions about the drug. This method teaches the student study habits and provides the opportunity to stress the important facts. One experienced teacher holds that one can learn the abilities of the whole class in one week by systematic board work—and he has avoided the correction of even one paper. If you have oral drills, blackboard work, frequent short quizzes; if you formulate examination questions based on the clinical situations at the time they are being experienced or studied—then you will have compiled a list of examination questions which will be practical, sound and fair. And best of all an examination that your students will pass.

Conclusion

This paper deals with the classroom teaching of Pharmacology II only as it is generally taught in this area. It was written to help the beginner. There are several other teaching areas when the pharmacist can be of great value but they will be treated in a later paper of this project.

a preliminary laboratory and clinical investigation of

NOVOBIOCIN SODIUM IN OPHTHALMOLOGY

by Margaret F. Sherwood, Ronald M. Wood, and W. Arthur Purdum

► THIS PRELIMINARY REPORT ON A RELATIVELY NEW antibiotic represents the combined effort of the laboratory and clinical staff of the Wilmer Ophthalmological Institute of the Johns Hopkins Hospital. The names listed on the paper merely indicate those individuals who coordinated the laboratory, clinical, and pharmacy studies.

Because bacteria develop resistance to antibiotics, the search for new antimicrobial agents is constant. Drugs which a few years ago were extremely valuable have gradually lost their effectiveness. At the time of its introduction, penicillin was effective against nearly all strains of staphylococci. Today laboratories are finding that fifty to eighty percent of the strains are penicillin-resistant. Organisms are appearing which are resistant to all the generally used antibiotics.

The search for new antibiotics turns up hundreds of new drugs each year. Those which show high activity against bacteria and at the same time low toxicity for animals are very few. One such antibiotic is the subject of this report.

This antibiotic is produced in nutrient media by selected strains of a newly isolated organism called *Streptomyces spheroids*. The antibiotic has been named novobiocin. Samples of this antibiotic for laboratory and clinical evaluation were made available to us through the courtesy of Dr. Sterner of the Medical Division of Merck and Company.

Activity

Novobiocin is active against strains of *Staphylococcus, Streptococcus, Diplococcus, Neisseria, Corynebacteria, Pasteurella, Erysipelothrix* and *Proteus*. Although the complete range of its antibiotic activity has not yet been determined, novobiocin appears to be highly efficient in its action against certain strains of *Staphylococcus, Streptococcus* and *Proteus* which are resistant to other antibiotics. Our studies showed the *in vitro* sensitivity of *Staphylococcus* strains which were resistant to penicillin and other antibiotics to be

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quite marked to novobiocin. All strains studied were found to be killed by concentrations of ten micrograms per milliliter or less and inhibited by concentrations as low as one tenth of a microgram per milliliter. Twelve recently isolated strains of *Proteus* were found sensitive *in vitro* to one hundred micrograms or less.

Solutions of novobiocin and other antibiotics were tested for activity when diluted before and after autoclaving for one hour at 121° C. The following antibiotics were chosen for this study: erythromycin lactobionate, oxytetracycline hydrochloride, polymyxin B sulfate, bacitracin, penicillin G potassium, streptomycin sulfate, chloramphenicol, tetracycline hydrochloride, neomycin sulfate, and viomycin sulfate. The paper disc technique was used and the test organism was *Staphylococcus aureus*. The results of this study revealed that six of the ten widely used antibiotics lost most, if not all, of their antibacterial activity against the test organism when dilutions were prepared before autoclaving for one hour, as compared with those dilutions prepared after autoclaving. Dilutions of novobiocin sodium prepared before and after autoclaving for one hour exhibited less loss in activity than most of the other antibiotics.

Method of Study

Using the method of Friedenwald and Bushke, the effect of novobiocin on the regeneration of corneal epithelium was studied in rats eyes. The cornea of a rat treated locally with two percent novobiocin solution showed no difference in the rate of healing when compared with a control cornea.

Irritation studies in normal rabbit eyes showed that solutions in Sorensen's phosphate buffer (*p*H 7.3) or ointments in white petrolatum containing one percent novobiocin were not irritating to the conjunctiva when applied at hourly intervals for eight hours.

To determine if novobiocin entered the anterior chamber following oral administration three rabbits were given one dose of 500 mg. per Kg. of body weight and at intervals of one, three, and six hours later samples of blood and aqueous humor were assayed. In two out of three rabbits traces of novobiocin were found in the primary aqueous and measurable levels were found in the secondary aqueous.

To determine whether effective levels were obtained in the aqueous humor of infected eyes following oral administration the following experiment was performed. One rabbit was given an anterior chamber injection of one twentieth milliliter of an undiluted eighteen hour broth culture of *Staphylococcus aureus* in one eye. Another rabbit received a similar injection of a *Proteus* culture. Twenty four hours later the injections were well established and treatment was begun orally, each rabbit receiving 500 mg. of novobiocin per Kg. of body weight. The animals were treated twice each day for a total of five doses over a period of two and one-half days. Four hours after the last dose samples of blood and aqueous humor were withdrawn and levels determined. This study indicated that measurable blood and aqueous antibiotic levels were reached and maintained over two and one-half days treatment with the said dose of novobiocin.

The aqueous humor was cultured upon removal. Fluid from one eye of each rabbit was free of organisms. Fluid from the other eye showed growth of a few scattered colonies of the infecting organism. The sensitivity of the isolated organisms was redetermined to see if resistance had yet developed. No increase in resistance was noted.

Results

These laboratory studies revealed that novobiocin had several valuable properties. It is effective against organisms resistant to other antibiotics. It is remarkably heat stable. It is not irritating in concentrations as high as one percent on prolonged use. It does not interfere with normal corneal healing.

Clinical Trial

Because of these properties it was deemed worthy of clinical trial. An ophthalmic ointment was prepared containing one percent novobiocin in white petrolatum. Patients with evidence of bacterial conjunctivitis were chosen for this study. Cultures and smears were taken. The patients were then given novobiocin ointment with directions to apply the ointment four times per day. They were then given an appointment to return to the clinic. Fifteen patients have thus far been studied. Of this group of fifteen, there was one poor result. This was a patient with a two year history of recurrent styes and conjunctivitis, which had been treated with many other antibiotics as well as cortisone, with transient remissions. On the culture, a penicillin-resistant but novobiocin-sensitive staphylococcus was isolated.

Summary

1. Novobiocin, a relatively new antibiotic has been found effective against several gram positive organisms. It is remarkably effective against penicillin resistant strains of *Staphylococcus*.

2. Low concentrations of novobiocin are effective against *Proteus*.

3. Novobiocin applied locally in a concentration of one percent is not irritating and does not inhibit corneal regeneration.

4. This antibiotic is heat stable.

5. When given orally, high levels are obtained in infected eyes.

6. Novobiocin is a valuable antibiotic for treating infection.

Fig. 1. Laboratory used for preparation of the sterile carcinogenic pellets, showing use of the sterile technique

a new technique for the preparation of sterile CARCINOGENIC PELLETS for implantation in experimental animals

by ROBERT W. CASE
CARL T. BRUECKMAN *and*
CLIFTON F. LORD, JR.

► This paper presents a simple, practical method for preparing sterile pellets of carcinogenic agents for implantation into brains of laboratory animals.

Several investigators[1,2,3,4,5,6,7,8] have shown methods of producing tumors of the brain with varying degrees of success. The brain has been demonstrated to be a particularly valuable organ for the study of chemical carcinogenesis. Ilfeld[1] implanted pellets of 5 percent dimethylbenzanthracene in cholesterol into the brain without success; similarly, Guerin[2] implanted crystals of benzpyrene into a few rats without success. Peers[3] tried injecting a 5 percent suspension of methylcholanthrene in lard, and found the material oozed out of the trephine wound. A successful pellet was reported to have been made by Shear.[4] This method consisted of drawing up a 5 percent solution of dimethylbenzanthracene in cholesterol into 1 mm. capillary tubes, where the solution solidified. The tubes had been previously oiled to facilitate removal of a 1 mm. x 2 mm. pellet weighing approximately 0.175 mg. We tried this method and found it unsuccessful. The pellets were extremely friable and broke when handled lightly with forceps. Seligman and Shear[5] also implanted pellets of fused methylcholanthrene in 20 C_3H mice, obtaining 11 gliomas and 2 fibrosarcomas. They also tried an injection of methylcholanthrene suspension in saline, but without results. Peers repeated his earlier work[6] using 10 percent methylcholanthrene-cholesterol pellets in 110 mice, and obtained 28 various types of tumors in 87 mice surviving approximately six months. Zimmerman[7] injected fused crystals of methylcholanthrene which produced a variety of tumors; however,

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Fig. 2. Mixing the pellets

a subsequent experiment with benzpyrene was unsuccessful. Zimmerman's method was to fuse methylcholanthrene and then carefully cut out small pellets with the aid of a sharp scalpel. This method was tried by us and it was found that not only was it extremely difficult to obtain uniform pellets, but the fused material powders rather easily and the carcinogen was implanted along the pathway of injection.

It is also worthy to note that some investigators[1,5,6] reported many granulomatous foreign bodies developing around the injected material, especially when lard or oil was used as a base. Russell[8] tried the method of Peers,[3] but using 30 percent methylcholanthrene in cholesterol. This method was not repeated since an earlier experiment showed that the friability of the pellets was increased with the increased concentration of methylcholanthrene. Moore[9] used methylcholanthrene powder and produced a series of gliomas; however, the spillage of the carcinogen into local tissue was extremely undesirable, causing tumors along the implantation pathway.

After trying the methods mentioned previously with varying degrees of success, we investigated a new approach to this interesting problem. Our first attempt was to develop a miniature suppository mold, using in it as a base inert materials such as cholesterol and lanolin and making a suppository which would be small enough to be used as a pellet, yet would retain its consistency, thus avoiding spillage of carcinogenic agents. After many attempts this proved unsuccessful as the viscosity of the mixture together with its surface tension hindered filling of the mold. An improved mold, having an increased diameter of the opening and a rounded inner surface gave equally negative results since the same problems of surface tension and viscosity were encountered. Several variations of the original mold were tried, with little success.

After several other attempts with various admixtures of bases and carcinogens, a successful procedure was developed. This involved a basic technique used by pharmacists for many years, but now virtually obsolete, that is, making "pills" of small enough diameter yet comparatively uniform in size which could be injected by means of a trochar. Our first effort was to fuse the methylcholanthrene with beeswax, roll into a "pill pipe" of one millimeter in diameter, and make small pills. This method was eventually modified to the use of 50 percent methylcholanthrene, 45 percent lactose and 5 percent acacia with a few drops of syrup, thus avoiding fusion of the methylcholanthrene.

Method

A detailed description of the method follows. All materials were tested for sterility or sterilized before use. In a wedgewood mortar, under a Sterileshield* (Figure 1.), the methylcholanthrene and inert ingredients were intimately mixed in as fine a condition as practicable. The mixture was then made into a plastic mass, soft enough to permit manipulation, yet firm enough to retain the desired shape. The mass was kneaded in the hands untii no fissures were visible, then rolled into a ball. This ball was rolled into a "pill pipe" or cylinder (Figure 2.), by means of a flat board, until the pipe was approximately one millimeter in diameter. The pipe was scored with a sharp razor, and the resultant pellets were rolled into globular shape between the index finger and thumb. They were then set aside to harden, and were ready to use in approximately 12 hours. Sample pellets were cultured to check sterility.

Summary and Conclusions

A practical method has been described for the preparation of small sterile pellets of carcinogens for implantation into laboratory animals. The method is simple and requires a minimum of time and equipment. This procedure is also being utilized to develop pellets of estrogens, androgens, etc. for delayed absorption and release. Since these pellets contain a known percentage of active ingredient, it is a simple matter to introduce a known quantity of active material.

The authors are gratefully indebted to Miss Margaret Cole, B.Sc. Pharmacy, for her valuable assistance in the preparation of the pellets. The authors wish to also thank D. M. Perese, M.D., Department of Neurosurgery, Roswell Park Memorial Institute, for his advice and assistance.

*Sterileshield made by Baker Company, Inc., Maplewood, New Jersey.

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The wounded at Fredericksburg, Virginia First Aid Station during Civil War

the role of the pharmacist in CONFEDERATE hospitals

by NORMAN H. FRANKE

► DURING THE WAR BETWEEN THE STATES, the Southern Confederacy was obliged to remain in a continuous state of emergency. From its inception to its death the Confederates States of America struggled under a new military concept: Total War. Under such conditions the short-lived Confederacy was never able to fully recognize the need for experienced pharmacists in its hospitals, and the Confederate Medical Corps never saw fit to grant official military status to hospital pharmacists. This was due, perhaps, to a considerable extent to the lack of organized educated personnel in the South at that time.

When Dr. J. Julian Chisolm drew up the regulations governing the Confederate hospitals, he carefully included a hospital steward or apothecary's clerk "acting as an apothecary".[1] To qualify for this position a man had to be ". . . honest, temperate, intelligent, write legibly and correctly, with some knowledge of book-keeping, pharmacy, and minor surgery . . .".[2]

The small hospitals (under 1,000 beds) were to employ a mess steward and a hospital steward. It was the duty of the hospital steward to undertake:[3]

> . . . under the surgeon, a general superintendance of the hospital; regulate its police discipline, ventilation, lighting and warming; attend to provision returns; carry out the surgeon's instructions as to the management of the hospital funds; make purchases for the hospital; take care of the hospitals stores; see that the cooking is properly performed; put up prescriptions, as well as render assistance in dressing minor wounds; see that the hospital property is duly cared for—and, in fact, be responsible to the surgeon for the general administration of the institution.

In hospitals of over 1,000 beds the burdens and duties would be so onerous for one man, that an apothecary steward was employed. It was his duty to:[4]

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. . . put up only such prescriptions as are written out by the medical officer of the division to which he is attached, and will issue nothing unless so directed. He will use on all occasions the scales and measures in the compounding of medicines, keeping all apparatus scrupulously clean, and everything in order. He will be held responsible by his division surgeon for proper care and dispensation of all medical supplies committed to his charge. Five days before the end of each month he will furnish the division surgeon with a statement of all medical supplies on hand, and the quantities of such as will be required for the ensuing month. None but such as are authorized shall be allowed to enter the dispensary.

Not all hospitals carried out these regulations to the letter. In some cases personnel was not available, in others facilities were lacking. For example, the hospital at Talladega, Alabama,[5] and the Poplar Lawn Hospital at Petersburg, Virginia,[6] employed no one in this capacity, while the hospital at Demopolis, Alabama, employed as a druggist a disabled veteran, W. J. Morris, at $2 a day.[7] The Chimborazo Hospital at Richmond under Dr. McCaw employed two skilled apothecaries, Sursdorff of North Carolina and Jett T. West.[8] Surgeon F. E. Daniel tells of having spent many pleasant hours fishing with the apothecary at the Lauderdale (Springs, Miss.) Hospital, a man named Armstead.[9] Mrs. A. F. Hopkins also paid a pharmacist, H. H. Sinclair, $30 a month at the Alabama Hospital No. 2 in Richmond.[10] One druggist, J. H. Robinson, was detailed for duty as an apothecary-steward at General Hospital No. 21 in Richmond by special order of General Lee.[11]

The conditions with this regard in the hospitals at Montgomery, Alabama, were recorded in a report with Special Orders No. 178 prepared by Surgeon R. L. Brodie, Medical Director, Division of the West, and sent by Col. G. M. Brent, Chief of Staff, to General P. G. T. Beauregard.[12] These were abstracted and are listed in Table I.

All in all, most hospitals employed some sort of hospital steward who served as an apothecary. These men were not always skilled druggists. Surgeon William H. Taylor commented:[13]

"Our Regiment had two medical men, a surgeon and an assistant surgeon. There was also a hospital steward—a *kind* of apothecary, whose duty it was to take charge of the care of the medical and surgical supplies, and to *prepare* or *dole out*, what was prescribed and to act as a general assistant to the surgeons." (Italics are this writers.)

But, save under special circumstances when pharmacists did serve in the dispensaries of the hospitals, it seems to have been more the result of the personal discretion of the officer or state commissioner in charge, than the result of a general policy of the Medical Department.

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TABLE I. LIST OF MONTGOMERY (ALABAMA) HOSPITALS AND THEIR APOTHECARY'S STATUS

NAME	LOCATION	NUMBER OF BEDS	APOTHECARY'S STATUS	COMMENTARY
Montgomery	Main and Perry Streets	292	One employed	Excellent stock of supplies
Concent Hill	Market and Perry Streets	250	None employed	——
St. Mary's	Bibb and Commerce Streets	325	None employed	——
Ladies	As Above	205	One regularly appointed	Apothecary has had no pay for six months
Watts	Near Railway Depot	250	One detailed	——
Stonewall	Next to Watts	300	Patient does work of druggist	——
Conti Street	No address given	140	One regularly appointed	——
Mott	Royall Street (Sic!)	63	None employed	——
More	Royal Street	123	None employed	——
Levert	None given	40	None employed	Dispensary not complete
Houster	None given	100	None employed	——
Midlet (Naval)	None given	250	None employed	——
County	None given (Operated by the Sisters of Charity)	160	None employed	Best dispensary
Negro Hospital	None given (For laborers)	Not given	One regularly appointed	Very clean

A view of the pharmacy at St. Anthony Hospital, Oklahoma City

HOSPITAL PHARMACY AND CENTRAL SUPPLY COMBINATION

a hospital pharmacist's viewpoint

by SISTER M. TERESA

► GOOD HOSPITAL SERVICE PRESUPPOSES GOOD PHARMACEUTICAL SERVICE. No hospital, seeking to maintain high quality in the care that ultimately reaches the patient, can be delinquent in respect to the professional and ethical standards of the pharmacy—a fundamental in better patient care. During recent years, increased interest has developed in the advantages of combining the pharmacy and the central supply departments.[1,2] These two services are of vital concern to the hospital administrator, director of nurses, nurses, physicians, and pharmacists. Hospital pharmacy-central supply combinations are mentioned rather frequently in articles pertaining to the welfare of the patient and one can find this topic discussed in many hospital and hospital pharmacy publications.

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Central Supply Station

The central supply department comprises that service within a hospital which provides professional supplies and equipment, both sterile and non-sterile, to all specialized departments of the hospital, to aid in the care and comfort of the patients, whether medical or surgical. The late W. B. Underwood, Director of Research of the American Sterilizer Company, made extensive studies relating to the planning and organization of work in the Sterile Central Supply Department.[3] This led to a number of findings of significance and importance. The modern concept

The Central Supply area showing autoclaves in background

Pharmacist and Nurse shown operating glove conditioner

of sterile supply centralization was developed largely through his efforts and guidance. The central supply department of the modern hospital is the natural outgrowth of a great deal of work done by the members of the American College of Surgeons. A great deal of credit for the establishment and organization should be given to the late Dr. Malcolm T. MacEachern, Associate Director, American College of Surgeons and Director of Hospital Activities. His efforts led to the centralization of all surgical supplies into one unit and to the standardization of surgical dressings. In many hospitals all sterilization was done in the surgical divisions in earlier days. But, with the ever increasing demand for quick and more efficient hospital services, difficulties arose and the establishment of a well-planned central supply department under sound supervision seemed to be the only answer for the safety of the patient.

It is the general opinion that our institutions have become more complicated in recent years. This is due, in part, to early ambulation of patients, which results in a fast turn-over of patients, and thus adds more responsibility to the pharmacist as well as to all other department heads. The ever-increasing number of new drugs manufactured makes the pharmacy department more expensive to operate.

We can readily see how the hospital administrator is confronted with the problem, "Just who should be in charge of the Central Supply Station" when he is considering the establishment of such a department. He is looking for someone who is experienced, reliable, and who may have purchasing experience. If the institution already employs a hospital pharmacist, who would be better equipped than this person with his or her professional knowledge and experience? No doubt more hospitals would employ registered pharmacists if they had enough duties for the pharmacist. This is particularly true with smaller hospitals. If pharmacists in hospitals wish to progress and to achieve greater professional recognition, they ought to be willing to assume additional responsibilities. This would encourage the administrator to think of them often in terms of a "Department Head," which of course implies responsibility for more supervision. By education the hospital pharmacist has learned much about sterilization. He can purchase economically, not only when purchasing drugs, but he can also keep the inventory of other professional supplies of the central supply department at a low minimum. He has had experience in taking inventory. The graduate nurse, who is frequently found in charge of the central supply stations, does not receive this basic training, since the curriculum in a training school for nurses does not provide such courses.

Why Not Combine Pharmacy and Central Supply

The pharmacist soon will realize that it is not too difficult to be in charge of a central supply department. Those hospitals across the country which have operated under this combination, find that it has been a great service to them: I would like to mention the spendid work done by Sister Mary John and her staff of Mercy Hospital, Toledo, Ohio; and Mr. Milton W. Skolaut and associates of the Clinical Center of the National Institutes of Health, Bethesda, Maryland.

Mr. Terrell, administrator of the West Texas Shannon Memorial Hospital, San Angelo, Texas, set up a Central Supply Department in his hospital a few years ago. In a letter to me he stated that he was very much pleased with the combined service under the supervision of a competent hospital pharmacist. Letters received from others stated that this topic had been under discussion a great deal in their respective institutions.

Supplies Maintained

Items stocked in the central supply station will vary with the institution. Some institutions have manufacturing of sterile solutions as one of the main functions of their central supply departments. Others prepare and furnish all kinds of dressings, treatment trays, surgical trays, rubber goods, such as hot water bottles, ice caps, catheters, etc. In some instances, penicillin and streptomycin preparations, as well as dextrose and other injectable medications, are handled from such a department. The hospital pharmacist purchases the above mentioned articles, and they should be dispensed only under his professional supervision.

Pharmacy-Central Supply at St. Anthony Hospital

During the years 1931 and 1932 a new addition to St. Anthony Hospital in Oklahoma City was under construction. One of the major concerns was a Central Supply Department. Prior to this time a small

dressing station, as it was called then, was on each floor of the institution, supervised by the head nurse of the particular division. The Superintendent of the hospital purchased all the supplies in those days. The Superintendent was already a very busy person, and when the hospital almost doubled in size, she found it necessary to find someone to relieve her of some of the burdens which were growing more numerous day by day. The Central Supply Department was placed within close proximity of the Pharmacy. The Chief Pharmacist had not been overburdened, up to this time, by too many duties. After much consideration the pharmacist was placed in charge of the Pharmacy and the Central Supply Departments.

My duty in Central Supply is in a supervisory capacity. When any new equipment is purchased for the department, I assist the personnel until they learn how to manipulate and use it before I place it in their charge. To take on this added responsibility makes the work of the pharmacist more interesting. Also, it has the advantage of providing more efficient and better patient care. To assure oneself that employees are happy and perform their duties properly, regular visits to the Central Supply Department are a sound procedure.

Staff

The size and number of the staff for the Central Supply Department depends on the number of services rendered by the department. The department in St. Anthony Hospital has a graduate nurse in charge, who is responsible to the Chief Pharmacist. The other personnel are all nonprofessional persons. These women can be trained to perform many duties, at less cost to the institution, which should not be performed by higher salaried personnel, such as graduate nurses or pharmacists. Mr. Walter Frazier, Past President of the AMERICAN SOCIETY OF HOSPITAL PHARMACISTS, has pointed out a number of duties which can be performed by nonprofessional people at a minimum cost to the hospital.[4] These persons can be utilized in both departments. However, the location of the central supply station must be in close proximity to the pharmacy department to permit the pharmacist to supervise both departments efficiently. This combined service is not advisable if the pharmacist already has too many duties. There would be danger of lowering the standard of pharmacy service.

The possibility of the many professional services a hospital pharmacist can render in the hospital for better patient care has been discussed. As hospital pharmacists, we have a great privilege by using our skill to assist in the healing the sick, to those who suffer pain, and once were lame. Time is ours to use, for good or ill, for all mankind. Let us try to forget self and work for others, that good may come to all, especially the sick and suffering. There is no greater reward than the happiness of accepting and discharging a responsibility with the assurance that your efforts have been crowned with success. And one day you may hear His gentle voice: *Come thou good and faithful servants. Whatsoever you have done to the least of my brethren, you have done unto Me.*

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View of pharmacy showing nurse receiving finished prescription

Therapeutic Trends

edited by WILLIAM JOHNSON

1-Phenyl-2-Aminopropane Alginate—Appetite Suppressant

In a series of 80 overweight patients taking 1-phenyl-2-aminopropane alginate in conjunction with diet, the average weight loss was 2 pounds per week. Of particular note was the marked reduction of side effects with this drug as compared with other appetite suppressants previously used. The fact that 1-phenyl-2-aminopropane alginate can be administered in the early evening without complaints of interference with sleep is an advantage to both physician and patient, since night-time eating is perhaps the most common cause of "diet cheating." In *J.A.M.A. 167*:433 (May 24) 1958, Gadek *et al* evaluate this drug as at least as effective as other appetite suppressants and it seems to be better tolerated and allows more freedom in adjusting dosage to meet individual patient requirements. It is believed that this drug is a valuable and needed tool in helping overweight patients to reduce their caloric intake. 1-Phenyl-2-aminopropane alginate is of no value for the depressed, obese patient or in cases where psychic stimulation is indicated. The 1-phenyl-2-aminopropane alginate for this study was supplied by the Nordmark Pharmaceutical Laboratories as Levonor.

WILLIAM JOHNSON

Pentacynium Methylsulfate—A Hypotensive Drug

Pentacynium bis-methylsulfate, N′(5-cyano-5-5-diphenylpentyl)-N′:N′:N² trimethylethylene-1-ammonium-2-morpholiniumbismethylsulfate, is a member of a series of unsymetrical bisonium salts. In a series of 30 patients all except one showed a significant fall in the supine systolic and diastolic blood pressure when given a subcutaneous test dose of from 3 to 10 mg. of pentacynium. After injection, the blood pressure started to fall in about 10 minutes and maximum lowering of blood pressure was noted in 1½ hours, slowly returning to normal in an average time of 12 hours. Intravenous administration produced a greater and more rapid fall in blood pressure than the subcutaneous route of injection; or even greater than by the intramuscular route. After oral administration the blood pressure began to fall in 20 to 30 minutes. In most cases there was moderate slowing of the pulse rate (10 to 15 per minute). The introduction of reserpine into the therapeutic regimen enhanced the hypotensive effect of pentacynium. The blood pressure was adequately controlled in 24 out of 30 cases for periods up to 18 months. Side effects observed were similar to those produced by other ganglion blocking agents; however, constipation was less severe. The material used in this investigation was supplied as Presidal by the Burroughs-Wellcome Co. This study was reported in *Lancet 1*:340 (Feb. 15) 1958.

W. E. HERSHBERGER

Compound B-111—A Potent Anti-Tubercular Drug

As a representative compound of the steroid acid amide of diamino diphenyl sulfone group, B-111 was chosen for this study. B-111, 4-desoxycholylamino 4′ amino diphenyl sulfone, was given intravenously and orally to guinea pigs and mice for a period of two months and was found to be well tolerated in all doses, without apparent toxicity. The suppressive effect in tuberculosis-infected animals compared favorably with other N-substituted sulfones (which are too toxic for use). The most striking discovery was that B-111 and streptomycin are synergistic. The combination has a bactericidal and bacteriostatic effect against *M. tuberculosis*. The activity of B-111 is due to the unhydrolyzed compound, as found by infra-red spectral comparison. The steroid portion of the drug acts simultaneously as a detoxifier and chemotherapeutic activator. B-111 was given orally and was well tolerated by humans, but a full report is not yet available. This study, presented by Berczeller in *Dis. Chest 33*:475 (May) 1958, was made possible by grants provided by the Lasker Foundation and the New York Foundation.

SYLVIA SCHMIDT

Dimenhydrinate—Obstetrical Adjunct In Labor

Experiments conducted by Rotter, Whitaker, and Yared and illustrated in *Am. J. Obst. Gyn. 75*:1101 (May) 1958 have shown that intravenous dimenhydrinate, given very slowly at any stage of labor, shortens labor time; exhibits a definite tranquilizing effect, and potentiates other analgesics. This drug also has a wide margin of safety. In a study of 505 cases, dimenhydrinate was given intravenously at various points in the four phases of the first stage of labor. The drug was found to be most useful when 100 mg.

was diluted with 10 ml. of water and given intravenously during the latent and accèleration phases of labor. Cervical trauma was inhibited beneficially and the average length of labor time was decreased 3.13 hours in primaparas and 2.7 hours in the multiparas. The results can be attributed to the remarkable relaxing effect made possible with dimenhydrinate. In most cases, other analgesics were unnecessary. The dimenhydrinate for this study was supplied by the Searle Co. as Dramamine.

SYLVIA SCHMIDT

Gamma Globulin—In Pustular Acne

An accidental observation of a case of pustular acne improvement was noted in a patient receiving gamma globulin for infectious hepatitis. In a further study of four teenage patients with severe pustular and cystic acne, two showed remarkable improvement of dried up lesions while there was no apparent effect in the other two patients after treatment with 10 ml. polio immune globulin for two successive weeks. Blood specimens drawn for C-reactive protein, serum albumin, and gamma globulin proved normal. This work is reported by Shaffer *et al* in *J. Invest. Dermat. 30*:97 (Mar.) 1958. The gamma globulin for this study was provided by the Michigan Department of Health.

SYLVIA SCHMIDT

Meprobamate—In Treatment Of Stuttering

In view of the handicap which stuttering presents, the application of drugs which allay the state of anxiety merits consideration. Speech defects are very common, affecting from 3 to 10 percent of children. The etiology of stuttering is complex but it is characterized by clonic and tonic interruptions (in a state of neuromuscular tension) of the breath stream. Progression into adult life is accompanied by distortion of the personality and few adults suffering from this condition are free from hypersensitivity regarding their disability. Maxwell and Patterson report on the use of meprobamate to interrupt this vicious cycle of tension, speech inhibitions, and consequent anxiety. The dosage of the drug is adjusted by the patient according to his own particular needs. Meprobamate was found to be valuable in relaxing the state of tension (which provokes and perpetuates the condition of stuttering). It was also noted that confidence in speech ability was restored and treatment facilitated. This study was reported in *Brit. Med. J.* page 873 (April 12) 1958.

R. H. HARRISON

Prochlorperazine—In Tuberculosis

The management problem in tuberculosis has always been challenging. There is a constant need for psychotherapy and other aids to the emotional adjustment of patients afflicted with this disease. Proper counseling and training from the earliest stage of hospital treatment help the patient be more cooperative with treatment and to adjust to hospital environment and routine. In a series of 61 hospitalized patients with active pulmonary tuberculosis, prochlorperazine was used for four to eight months concomitantly with established antituberculosis drugs. The general status of tuberculosis was improved in 61 percent and unimproved in 39 percent. Mental-emotional response to the hospital regimen was improved in 64 percent of the patients and remained unchanged in 36 percent. AWOL incidents were reduced considerably below the average. There was no antagonism to antimicrobial drugs. The effectiveness of prochlorperazine in eliminating nausea and vomiting associated with administration of *p*-aminosalicylic acid, without serious effects of its own, is sufficient to make it a useful adjunct in tuberculosis therapy. Increased appetites with noticeable weight gains were due to this antiemetic action. The results of this study by Shubin *et al* are published in *Antibiot. Med. Clin. Ther. 5*:305 (May) 1958.

W. E. HERSHBERGER

Oximes—In Treatment Of Anticholinesterase Compound Intoxication

Intoxication by anticholinesterase compounds causes an excess of acetylcholine to accumulate at the nerve endings. Depending on the type of nerve ending at which this accumulation occurs, there may be caused muscarine-like effects (nausea, vomiting, abdominal cramps, and diarrhea) or nicotine-like effects. The atropine-like effect of the oximes 2-PAM (pyridine-2-aldoxime) and DAM (diacetyl monoxine) were studied by Grob and Johns and the results of their study are reported in *Am. J. Med. 24*:497 (April) 1958. These oximes protected against the inhibition of human cholinesterase enzymes by organophosphorus and quaternary ammonium anticholinesterase compounds *in vitro,* and 2-PAM reversed this inhibition. The intravenous dose required to alleviate generalized weakness was 1 to 2 Gm. These doses did not relieve the muscarine-like effects of the anticholinesterase compounds, and their influence on central neural effects was not pronounced. DAM produced local burning and mild systemic symptoms. 2-PAM produced a transient, local neuromuscular block following the intra-arterial injection of high concentrations. This was enhanced by the prior injection of anticholinesterase compound. 2-PAM and DAM are valuable adjuncts to atropine in the management of anticholinesterase intoxication.

R. H. HARRISON

Timely Drugs

Ambutonium Bromide

CHEMICAL NAME: (3-Carbamoyl-3,3-diphenylpropyl) ethyldimethylammonium bromide.
INDICATIONS: Anticholinergic agent exhibiting antisecretory and spasmolytic activity; indicated for relief of hypersecretion and hypermotility accompanying gastric and duodenal ulcer and other organic and functional disorders of the gastrointestinal tract.
SIDE EFFECTS AND CONTRAINDICATIONS: Dryness of the mouth, blurring of vision, urinary hesitancy, mild constipation, and occasional drowsiness may occur in a few individuals; caution should be exercised in patients with prostatism or urinary retention; contraindicated in patients with glaucoma.
DOSAGE: Adults, 10 mg. 4 times daily, gradually increased to 15 or 20 mg. until maximum relief is obtained; children, proportional to body weight.
PREPARATIONS: Tablets of 10 mg.
PACKAGING: Bottles of 100 tablets.
SUPPLIER: Wyeth Laboratories.

Deaner

CHEMICAL NAME: 2-Dimethylaminoethanol; Deanol.
INDICATIONS: Antidepressant indicated in chronic fatigue states, mild depression including neurotic and reactive depression, chronic headache including periodic and functional relaxation types, migraine, and neurasthenia.
SIDE EFFECTS AND CONTRAINDICATIONS: Causes increased seizure rate in grand mal epilepsy or mixed types of epilepsy with a grand mal component.
DOSAGE: Initially, 25 mg. daily in the morning; usual maintenance, 25 to 75 mg. for adults, 12.5 to 75 mg. for children.
PREPARATIONS: Tablets containing 25 mg. 2-dimethylaminoethanol.
PACKAGING: Bottles of 100 tablets.
SUPPLIER: Riker Laboratories.

Kantrex

COMPOSITION: Antibiotic derived from *Streptomyces kanamyceticus*.
INDICATIONS: Bactericidal against a wide variety of gram-positive and gram-negative pathogens, including many resistant strains of *Micrococcus pyogenes* var. *aureus*.
SIDE EFFECTS AND CONTRAINDICATIONS: Signs of renal irritation and skin eruptions, which disappeared on cessation of therapy, occasionally noted; signs of eighth nerve dysfunction observed in a few patients, but appears to have less toxic potential than streptomycin.
DOSAGE: Orally, for intestinal antisepsis and control of gastrointestinal tract infections caused by shigella and salmonella, 1 to 2 Gm. daily in 2 to 4 divided doses; same dosage may be administered intramuscularly.
PREPARATIONS: Capsules of 0.5 Gm. and injection, as the sulfate, 0.5 Gm. per 2 ml. and 1.0 Gm. per 3 ml.
PACKAGING: Bottles of 20 and 100 capsules and rubber-capped vials.
SUPPLIER: Bristol Laboratories.

Lorfan Pediatric Ampuls

GENERIC NAME: Levallorphan tartrate.
INDICATIONS: Intended for treatment of narcotic-induced respiratory depression in newborn; usually acts within one minute and effect lasts for 2 to 5 hours.
DOSAGE: Subcutaneously, intramuscularly, or intravenously, as determined by physician.
PREPARATION: Ampuls containing 0.05 mg. per ml.
PACKAGING: 1 ml. ampuls in boxes of 6 and 25 ampuls.
SUPPLIER: Roche Laboratories.

Lubath

COMPOSITION: Cottonseed oil.
INDICATIONS: After-bath pruritus.
PREPARATIONS: Highly refined cottonseed oil, made dispersible in hard or soft water by addition of non-irritating and nonionic surfactant; lightly scented.
PACKAGING: 8 oz. and 16 oz. bottles.
SUPPLIER: Texas Pharmacal.

Meticortelone Soluble

GENERIC NAME: Prednisolone sodium hemisuccinate.
INDICATIONS: Provides higher steroid dosages needed in emergencies such as shock which is uncontrolled by routine measures, dangerous drug reactions, and serious posterior-chamber eye lesions.
SIDE EFFECTS AND CONTRAINDICATIONS: Except when used as emergency replacement therapy for acute adrenocortical insufficiency, contraindicated in patients with active or questionably healed tuberculosis, agitated psychotic states, active peptic ulcer, or herpes simplex of the eye.
DOSAGE: Intravenously or intramuscularly, 25 to 50 mg. injected over a period of one minute; may be repeated every 3 or 4 hours for 4 doses.
PREPARATIONS: Injection, as soluble sterile powder, in 50 mg. vials.
PACKAGING: Boxes of 1 and 25 vials.
SUPPLIER: Schering Corp.

Versatol-A

COMPOSITION: Human serum.
INDICATIONS: Serum standardized for 16 blood chemistry tests, with each constituent present in the abnormal or pathological range of values; results are determined in the following tests: bilirubin, free cholesterol, total cholesterol, uric acid, PBI, chlorides, sodium, potassium, calcium, inorganic phosphorus, glucose, nonprotein nitrogen, urea nitrogen, total nitrogen, total protein, and creatinine.
PROCEDURE: Used as a companion product to Versatol, to provide an abnormal in addition to a normal control; to provide a second point for preparing calibration curves or for checking pre-calibrated instruments.
PREPARATIONS: Vials containing freeze-dried human serum.
PACKAGING: 5 ml. vials, in boxes of 3 and 10 vials.
SUPPLIER: Available to laboratories through laboratory supply distributors or Laboratory Supply Division of Warner-Chilcott.

SELECTED PHARMACEUTICAL ABSTRACTS

and summaries of other articles interesting to hospital pharmacists

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edited by CLIFTON J. LATIOLAIS *and* LEO F. GODLEY

STERILIZERS, TESTING OF

The Testing of Sterilizers, Kelsey, J. C., The Lancet (Great Britain) 1:306 (Feb. 8) 1958.

The article compares the resistance of certain spore bearing pathogens to moist heat with the resistance of commonly used test organisms.

The resistance to moist heat of 25 samples of spore papers was determined. None was found to be satisfactory. Theoretically, spores should provide the most realistic test, but in actual practice the results can be very misleading, unless the strain, and further, each batch of spore papers is tested for heat resistance. Mesophils provide an inadequate safety margin, while thermophils may be too heat resistant and result in needlessly discarding a batch run.

Soil samples are too variable, often too resistant, and offer certain cultural difficulties.

Because of the above conditions the author suggests that bacteriological preparations should only be used to assess new techniques or equipment or when a "full dress" inspection is needed for administrative or forensic reasons.

The author felt that chemical indicators offered the best test of the efficiency of a sterilizer. He suggests they should have a definite color change at the end of the exposure time, should be stable, cheap, and if possible, sensitive only to moist heat.

In England the chemical indicator most near this ideal criteria is Browne's tube. It does not differentiate between moist and dry heat, however. The author points out that the use of chemical rather than bacteriological methods for testing hospital sterilizers should not be considered revolutionary. Milk pasteurization tests are no longer done with bacteriological counts but rather by purely chemical estimates of the phosphatase remaining after the heat treatment.

DOUGLAS SILVERNALE

FUTURE DOSAGE FORMS

Future Dosage Forms, Jarowski, C. I., Drug and Cos. Ind. 82:450 (Apr.) 1958.

This article describes the recent advances made in the production of various oral and parenteral dosage forms. The author cites the use of press-coated tablets which permits the use of incompatible solids and also affords the possibility of providing sustained release medications. The increased use of press-coated tablets is also assured because of greater uniformity and more predictable disintegration. The author says that there will be a decrease in the use of pan sugar-coated tablets as pharmaceutical manufacturers become more adept at press-coating. Pharmaceutical research at many colleges of pharmacy has strengthened the idea of press-coating of tablets.

Sustained release medications are on the continual increase since they afford the advantages of less frequent drug administration coupled with more uniform levels of absorption within the body. The primary disadvantage that deters greater use of sustained release medications is that many agents are not absorbed too well beyond the duodenum. The problem seems to resolve itself about the difficulty encountered in retaining these medicinals in the upper area of the gastrointestinal tract.

The author indicates that greater attention will be given to improving the oral absorption of many medicinals that have been used for some time. Research activity will be centered about the establishment of new principles and more accurate knowledge about the mechanism of oral absorption.

Syrups, elixirs, and emulsions will be more palatable and more stable because of advances in emulsion technology.

Parenteral medications of the future will be better tolerated, more stable, and will incorporate the principles of sustained release action. The use of sustained release parenterals will permit not only more uniform blood levels but also will accomplish less frequent need of administration by this painful route as well as reducing the excretion rate of the medicinal.

Topical medications of the future will utilize aerosol packaging to a great extent because of the greater efficacy of this form of therapy.

EDWARD SUPERSTINE

CALAMINE LOTION FORMULATION

The Formulation of Oily Lotion of Calamine, Carless, J. E., Pharm. J. 180:419 (May 31) 1958.

Oily Lotion of Calamine, B.P.C. is not a satisfactory formulation because, during storage, sedimentation and breaking of the emulsion result. The author experimented with various formulations in order to offer an alternative preparation having improved physical characteristics which, in addition, would be compatible with ichthammol.

Results indicate that a stable oily lotion of calamine can be prepared in which ichthammol can be dispersed. The recommended formula contains calamine 5 Gm., wool fat 5 Gm., zinc stearate 2 Gm., oleic acid 1.0 Gm., light liquid paraffin 45 Gm., lime water to make 100 ml. The recommended procedure for preparation is as follows: triturate the calamine and zinc stearate with the wool fat, oleic acid, and liquid paraffin previously melted together; transfer to a suitable container and gradually add lime water with vigorous shaking.

CLIFTON J. LATIOLAIS

PHYSOSTIGMINE COLLYRIA, STABILITY OF

Studies on the Stability of Drugs. 12. The Stability of Eye Drops of Physostigmine, Morch, Jorgen, Dansk Tidsskr. Farm. 32:98 (May) 1958.

Eye drops of physostigmine (eserine) contain 1% of the salicylate and 0.75% of sodium chloride according to the Ph. Dan. 1948. The eye drops must not show a red color, and sterilization by heating is not permitted. In aqueous solution physostigmine decomposes under the formation of the colorless phenol eseroline, which is easily oxidized to the red rubreserine and methylcarbimide or methylcarbamic acid, which both give methylamine and carbon dioxide by further degradation. Rubreserine may be further oxidized to eserine blue and eserine brown.

After storage for 3 months the official eye drops were colored and showed a loss of 1% at 20°C. and 3% at 30°C. Heating at 100°C. for 15 minutes gave a loss of 1 to 4 % depending on the pH, which varied from 5.1 to 5.7 for three samples of physostigmine salicylate. The heating resulted in a red color. Addition of boric acid (1.56% to produce isotonicity) instead of sodium chloride did not affect the results significantly.

The addition of 0.1% (but not less) of sodium pyrosulphite prevented the discoloration for several months, even if the eye drops were heated at 100°C. for 15 minutes, but after storage the pH was too low (about 3).

In order to maintain the pH-value of the eye drops, 2% of secondary sodium citrate (1.5 H_2O) was used as a buffer (pH 5.0). A solution containing 1% of physostigmine salicylate, 0.1% of sodium pyrosulphite and 2% of secondary sodium citrate showed a loss of 1 to 2% after heating at 100°C. for 15 minutes with no discoloration or change in the pH. After storage at 20°C. for 6 months the heated solutions were pink and showed a loss of 10%.

An attempt to prevent the discoloration by the addition of disodium ethylenediaminetetraacetate in varying concentrations was not successful, probably because the oxidation of eseroline to rubreserine is almost instantaneous, and the catalysis of the oxidation by metal-ions is therefore of no significance. The highest concentration used (0.05%) of disodium ethylenediaminetetraacetate increased the discoloration.

AUTHOR'S SUMMARY

EPINEPHRINE INJECTION, STABILITY OF

The Stability of Injections of Adrenaline and Noradrenaline, Morch, J., Pharm Weekblad 93:141 (Feb. 22) 1958.

Injections of adrenaline and noradrenaline are quite unstable unless certain precautionary measures are taken to prevent a loss in activity. The loss in activity that often results is due to two different processes, namely racemization and oxidation.

In order to prevent racemization from taking place, it is preferable to use the racemic adrenaline rather than the levo-rotatory form. However, since the racemic form is only half as active as the levo-rotatory form, twice the amount of the former compound must be used.

Pyrosulfite is added to the injections as an antioxidant. However, even if this is used in excess to the oxygen content of the ampul, it is possible only to avoid discoloration and retard, not prevent, oxidation from occurring. Another aid for increasing the stability of the solutions is to dispense the injections in well-filled ampuls or vials, thus limiting the volume of air in contact with the solutions.

ROBERT L. RAVIN

OPHTHALMIC SOLUTIONS, FACTORS TO CONSIDER IN PREPARING

Investigations into the Sensitivity of the Human Eye to Hypo- and Hypertonic Solutions as well as Solutions with Unphysiological Hydrogen Ion Concentrations, Trolle-Lassen, C., Pharm. Weekblad 93:148 (Feb. 22) 1958.

The increasing interest in ophthalmological solutions has resulted in numerous investigations into the factors securing the least possible inconvenience to the patient. When aiming at preparing the least irritating eye drops two main factors of particular importance should be borne in mind, namely the osmotic pressure and the hydrogen ion concentration of the solutions.

Several compounds, such as sodium chloride, dextrose, urea, and ammonium chloride, have long been used to make isotonic solutions. However, substances such as urea and ammonium chloride diffuse through physiological membranes and so the problem arose whether (1) to treat all substances equally when calculating osmotic pressure, or (2) to include only the substances which do not penetrate through animal membranes, e.g. sodium chloride, and to ignore the concentrations of substances diffusing freely, e.g. urea and ammonium chloride. A statistical analysis of the experimental results showed that in preparing eye drops it is unnecessary to consider the ability of a substance to pass through physiological membranes. It is also worth noting that there is a greater margin for hyperosmotic than for hypoosmotic solutions.

Regarding hydrogen ion concentrations, it had previously been determined that the *p*H of eye solutions should be about 7.4, which approximates the hydrogen ion concentration of the lachrymal fluid. During this investigation, it was found that the eye will react to an even slight lowering of the physiological *p*H value of 7.4, but that solutions of *p*H 9.7 will irritate in only about one % of the patients.

ROBERT L. RAVIN

ALGINATE MUCILAGES, CHARACTERISTICS OF

A Study of the Preparation and Rheological Behaviour of Alginate Mucilages, Bollinger, Von Rosmarie and Munzel, K., Pharm. Acta. Helv. 33:141 (April-May) 1958.

Investigations on the rheological behaviour and the viscosity of alginate mucilages and the influence of the different preparation methods show the following:

1. Alginate solutions are pseudoplastic (quasiviscous) liquids, the viscosity of which decreases as the shearing stress increases.
2. Raising of temperature causes a strong decrease of viscosity in alginate solutions.
3. If water with a temperature higher than 70°C. is used for the manufacture of the mucilages, they will show a smaller degree of viscosity since depolymerisation seems to take place.
4. It is advantageous to prepare alginate mucilages as follows: moisten or impaste the alginate with 2 to 4% (with reference to the final weight) of ethyl alcohol (95% v/v) or concentrated glycerin before adding the water, in order to avoid the formation of partly swollen lumps. Vigorous stirring accelerates the swelling.
5. Alginates are rapidly swelling substances. If 2 to 4% (with reference to the final weight) of ethyl alcohol or concentrated glycerin has been used to make them swell and dissolve, the mucilages will reach their maximum value of quasiviscosity within one hour. This value, however, begins to decrease very soon, and therefore the viscosity of alginate solutions has to be considered as rather inconstant.

AUTHORS' SUMMARY

VITAMIN E PRODUCTS, A SURVEY OF POTENCY

The Potency of Vitamin E Products on the Canadian Market, Corck, E. W. and Mack, G. E., Canad. Pharm. J. 91:58 (June) 1958.

Samples of all available preparations for internal use containing vitamin E alone were purchased and assayed for their vitamin E content. Eighty products from 43 companies were examined. Most of these preparations met labeled claims for potency. Only five products were found significantly below labeled claims, apparently largely a result of the use of an incorrect factor. Seven products were found incorrectly labeled in that the potencies were not stated in International Units. The results of this survey indicate that vitamin E products available in Canada may be prescribed and purchased with confidence that potencies will meet labeled claims.

AUTHORS' SUMMARY

SUSPENSIONS, ULTRASONIC EFFECTS ON

A Study of the Effects of Ultrasonics on the Particle Size of Certain Suspended Pharmaceuticals, Araujo, O. E., and Belcastro, P. F., J. Am. Pharm. Assoc., Sci. Ed. 47, 390 (1958)

Using a focused bowl, barium titanate piezoelectric transducer, energized by a 250-watt radio-frequency generator, experiments were performed to determine what effect ultrasonic insonation had on the particle size of selected pharmaceutical solids in aqueous suspension. The drugs studied were zinc oxide, bismuth subcarbonate, sulfathiazole, and procaine penicillin G.

Rate of sedimentation was used as the criterion for estimating the degree of particle size reduction in the suspensions. Sedimentation rate was measured by a light absorbance method, using a spectrophotometer and making all measurements at a wavelength of 500 millimicrons. The variable measured was the length of time necessary to reduce the initial absorbance of 50% of its original value.

With dilute suspensions—that is, concentrations of 1% or less of solids, it was found that the particle size of each of the solids was progressively reduced as the duration and intensity of insonation were increased. Maximum effects were observed with the bismuth subcarbonate suspensions, followed in order by sulfathiazole, zinc oxide, and procaine penicillin G. At maximum conditions of insonation, both sulfathiazole and procaine penicillin G showed some evidence of decomposition.

More concentrated suspensions (2%, 5%, 10%) with and without stabilizing agents added, were also studied. Sedimentation rates for these suspensions were determined by a direct method. The mean particle size of the solids in each of the concentrated suspensions was also reduced by ultrasonic treatment in all instances.

WARREN E. MCCONNELL

SURGICAL SCRUB DETERGENTS

Development of a Germicidal Soap Containing Bithionol, Hopper, S. H., and Wood, K. M., J. Am. Pharm. Assoc., Sci Ed., 47, 317 (1958).

Using culture media containing 1% Tween 80 as a germicidal inactivating agent, it was found that a commercial surgical scrub detergent, containing hexachlorophene, was not as highly effective in reducing cutaneous bacterial count as had previously been reported. Results of experiments to develop a surgical scrub soap which was more effective and less expensive than commercial preparations are reported. The preparation developed causes significantly fewer skin reactions than a formula which these workers had previously published.

This surgical scrub preparation is made by dissolving 378.0 Gm. sodium hydroxide in one gallon of distilled water in a pyrex bottle—then slowly adding 1140.0 Gm. of bithionol (Actamer, Monsanto Chemical Company) with constant agitation until the bithionol is dissolved. Next, 19,000.0 ml. of LD-44 (Stepan Chemical Company, Chicago, Illinois) is placed in a stainless steel mixing tank and

the bithionol solution added. Mix gently and add 50.0 ml. perfume oil No. 11420 (Fritzche Brothers), mix well and add enough distilled water to make 38,000.0 ml. Bottle in amber containers.

Data are presented which show that the formula developed is effective in reducing the bacterial population on the skin following surgical scrubs to a low value.

WARREN E. MCCONNELL

SOLUBILIZED OILS

The Dispersion of Liquids in Aqueous Solutions of Amphiphilic Compounds, O'Malley, W. J., Pennati, Luciano, and Martin, A. N., J. Am. Pharm. Assoc., Sci. Ed., 47, 334 (1958).

The authors discuss the nature of solubilization of nonpolar liquids in water by means of amphiphilic compounds (molecules possessing both hydrophilic and lipophilic character). They further describe experiments with three ternary systems (a) peppermint oil-water-Tween 20, (b) peppermint oil-water-polyethylene glycol 400, and (c) benzyl benzoate-water-polyethylene glycol 400, wherein the ratio of nonpolar compound to amphiphilic compound was increased over a definite range and for each given ratio in the series, an amount of water was titrated into the mixture until the entire solution remained turbid for one minute, as observed in a beam of light passing through the solution. The data obtained were plotted as triangular diagrams to show the effects of the three materials simultaneously. The peppermint oil-water-Tween 20 system was studied at temperatures of 10°, 20°, 30°, and 40° while the other systems were investigated at 20° only.

From the three-component phase diagrams plotted from the data, it is possible to estimate accurately the proportions of the three components which are necessary to form clear solutions. Furthermore, from a phase diagram of a ternary system such as peppermint oil-water-Tween 20, it is possible to predict accurately what will be the effect of dilution of the system with any amount of water.

The authors point out that such experiments as these can assist one in the development of solubilized products.

WARREN E. MCCONNELL

VITAMIN B_{12} STABILITY

Vitamin B_{12} in the Presence of Vitamin B_1 and Niacinamide in Aqueous Combinations, Gambier, A. S., and Rahn, E. P. G., J. Am. Pharm. Assoc., Sci. Ed., 47, 356 (1958).

This is a report of continuation of a study regarding the stability of vitamin B_{12} in the presence of other B-complex components in aqueous solutions. Results showed that the most critical factors determining the stability of vitamin B_{12} in the presence of the other B-complex components are (1) ratio of vitamin B_1 to vitamin B_{12} concentration in solution, (2) purity of components, (3) *ph* of the solution, and (4) how completely the vial or ampul is filled with the solution.

It was found that ratios of Vitamin B_1 to Vitamin B_{12} of up to 500 to 1 yielded optimum stability at room temperature. At greater ratios, stability decreased rapidly. It was recommended that for aqueous combinations of Vitamin B_{12} with Vitamin B_1 in the presence of other B-complex components the ratio should not exceed 120 to 1 of Vitamin B_1 to Vitamin B_{12}.

A *pH* range of from 3 to 4 was reported as being ideal for optimum stability of these solutions.

It was found that a ratio between the liquid volume and the air volume present in the sealed ampuls should be 1.73 to 1.00 for optimum stability. Lower ratios than this cause precipitation of some of the ingredients in the solution while higher ratios led to discoloration of the solutions.

WARREN E. MCCONNELL

ASPIRIN, HYDROLYSIS OF

The Hydrolysis of Acetylsalicylic Acid from Aqueous Suspension, James, K. C., J. Pharm. Pharmacol. 10:363 (June) 1958.

Aqueous suspensions of acetylsalicylic acid have long been known to be more stable and less prone to degradation by hydrolysis than aqueous solutions of the medication.

A study was conducted to determine the kinetics of hydrolysis from the suspension in order to find those factors responsible for a more stable preparation. The extent of hydrolysis due to fluctuations in temperature was examined employing temperatures of about 20° (room temperature), 34°, 50°, 60°, and 100°. Also considered was the effect of the concentration of aspirin in the suspension using concentrations of 3.3, 6.5, and 13.0% at room temperature, 70° and 100°.

Correlating the data, the author finds that there is a very definite expedition of hydrolysis accompanying temperature rise, a change of 20° to 30° yielding a one and a half to twofold increase in hydrolysis rate. It was also noted that the rate of hydrolysis is inversely proportional to the concentration of acetylsalicylic acid in suspension at all temperatures.

ROBERT W. MAHONEY

BARIUM SULFATE FOR ROENTGENOSCOPIC PURPOSES

Method of Purification and Improvement of the Ability to Float on Water of Barium Sulphate for Roentgenoscopic Purposes, Nesteruk-Szlompek, D. and Smolenski J., Acta Poloniae Pharmaceutica (Poland) 15, 1:51 (Jan.-Feb.) 1958.

The fineness and purity of barium sulfate powder for roentgenoscopic purposes depend on several factors which are to be allowed for when preparing the substance via precipitation of the solution of barium chloride by addition of a solution of sulfates or sulfuric acid. It has been found by the authors that the most fine barium sulfate powder is obtained when precipitating a strongly concentrated (e.g. 25%) solution of barium chloride at normal temperature (20°C) and in neutral solution. It has also been ascertained that heating the precipitate in water or in the residual liquid after the precipitation procedure during many hours produces a substance distinguished by very fine particles. As to the purification, the best results were achieved with the following process: Heat the precipitated barium sulfate in the concentrated residual liquid during several hours while raising slowly the temperature; thereafter wash the precipitate with water on a filter. As a consequence of the heating, the water is internally adsorbed by the particles of barium sulfate and the filtration is accomplished without difficulty and the impurities are removed with perfect ease.

HUBERT ZACEK

DISINTEGRATION OF TABLETS

The Problem of Disintegration of Tablets, Makhkamov, S. M. and Umanskyi, Z. M., Meditsinskaya Promyshlennost S.S.S.R. (U.S.S.R.) 12, 4:24 (April) 1958.

Among the many suggestions which are made with respect to the tests of the disintegration of tablets the following ones are most important:

All coated tablets have to disintegrate in water within 1 hour, with the exception of enterosolvent tablets which must resist artificial gastric juice during 1 hour but have to disintegrate in artificial intestinal juice within the same period. Lingual tablets shall dissolve in the mouth within 5 to 15 minutes; whereas, they have to dissolve or disintegrate in water not earlier than in 10 minutes and no later than in 30 minutes. Uncoated tablets, which do not contain irritable substances, must dissolve or disintegrate in water within 10 minutes. As far as the disintegrative medium is concerned, there is no difference between water, 0.5% solution of hydrochloric acid, 0.3% solution of sodium hydrocarbonate, and natural or artificial gastric and intestinal juices. Between 20° and 40°C the velocity of the disintegration of most tablets is not influenced by the temperature.

HUBERT ZACEK

CANCER THERAPY, PROGRESS IN

Expectations in Cancer Chemotherapy, Coghill, Robert D., Drug and Cos. Ind. 82:604 (May) 1958.

This article provides a vivid picture of the cancer chemotherapy effort. The author defines cancer as "a collective term referring to several hundred different diseases which result from a variety of etiological factors. These diseases all have one common feature or characteristic—the unregulated proliferation of cells."

It is now apparent that no single agent is capable of destroying all cancers just as no single agent is available to cure all infections. One of the major problems in today's search for chemotherapeutic agents to combat cancer is that little is known about the nature of the disease. The two fundamental questions to be answered are: what are the exploitable biochemical differences between malignant and normal cells; and what is the etiology of the group of diseases known as cancer?

Several theories attempt to explain the cellular changes

responsible for malignancy. One theory explains it on the basis that there is something in the cell which was not present before or that something is missing from the cell which is a growth regulating factor.

A second theory postulates that cancer has a viral origin. Some feel that there is a virus responsible for every case of cancer; others postulate that viruses may be responsible for some cases of carcinoma while other cancers are caused by other etiologic factors. This consideration of the unknown etiologic factors indicates how little the investigators have to go on in attempting a rational approach to the problem of cancer chemotherapy. There appears to be almost complete reliance upon gross screening of thousands of compounds in an attempt to find agents capable of destroying or modifying cancer. Approximately 40,000 materials are screened annually in a search for chemotherapeutic agents. These materials come from three major sources: (1) off-the-shelf choice of chemicals from universities, research organizations, and manufacturing firms; (2) programs of synthesis based upon existing leads arising from compounds that have exhibited activity; and (3) antibiotic "beer" screening programs.

There are eight screening laboratories under contract to the Cancer Chemotherapy National Service Center of the National Cancer Institute. Aside from these laboratories, there are several "in-plant" screening facilities in pharmaceutical companies.

Screening programs are based upon the use of solid subcutaneous forms of Sarcoma 180 and adenocarcinoma 755, and the ascitic form of leukemia L1210. Agents are screened at maximum tolerated doses and are considered potentially active when they meet minimum standards of activity in three consecutive tests on the same tumor at the same dose. They might be rejected as inactive at any stage.

Active compounds are tested preclinically from a pharmacological standpoint and, after assurance of safety for human use, they go into clinical trial.

Clinical study should serve the purposes of (a) rapid and intelligent elimination of materials that are of little use; (b) determination of the types of cancer that are susceptible to the agent; (c) definition of the optimal use of an agent against a specific tumor; and (d) comparison of the effectiveness of different agents.

At present, 25 steroids and 19 other compounds of a synthetic nature are under study in 165 hospitals. The active drugs fall into three categories: hormones, alkylating agents, and anti-metabolites.

Chemotherapy is now producing good results in several types of cancer, including leukemia, cancer of the breast and prostate, and Hodgkin's disease. Leukemia has shown the greatest response to drug therapy.

EDWARD SUPERSTINE

HOSPITAL INFECTIONS DUE TO OXYGEN THERAPY

Oxygen Therapy - An Unsuspected Source of Hospital Infections?, MacPherson, C. R., J. Am. Med. Assoc. 167:1083 (June 28) 1958.

A bacteriological investigation of the humidifying apparatus used in oxygen therapy revealed gross contamination of a high percentage. Possible sources of contamination were traced to: (1) use of non-routinely sterilized apparatus; (2) use of contaminated distilled water used in the reservoir of the humidifier; (3) difficulty in cleaning the apparatus; and (4) lack of any standard technique designed to prevent contamination. Examination of the oxygen showed repeated sterile cultures. Contamination of the water was eliminated with the use of commercial, sterile distilled water. Cleansing of the various parts of the humidifier after detergent and disinfection procedures reduced the gross contamination considerably, but did not insure a reasonable degree of sterility. The use of the autoclave was regarded the method of choice, but had the disadvantage that it would damage certain parts of the apparatus of some models. In view of the results of the study, specific recommendations were made to eliminate the major sources of contamination and to include routine sterilization of the apparatus concerned.

NORMAN HO

ANTIPERSPIRANTS, CONTROL OF SWEATING AND BODY ODOR

Control of Axillary Sweating and of Body Odor, Hermann, F. and Sulzberger, M., J. Am. Med. Assoc. 167:1115 (June 28) 1958.

It was found that aluminum chloride solutions with a wetting agent exhibited a stronger axillary antiperspirant effect than aluminum chloride alone. This finding suggests that the addition of a suitable wetting agent increases the contact of the aluminum salt with the stratum corneum, especially at the sweat pores, in the areas where the salt tends to wash off by sweat. The incidence of untoward side effects on the skin is rare, considering the tremendous number of daily applications of aluminum salt antiperspirants to the axilla. The antihidrotic action of the aluminum salts is not clearly understood. It appears to be the result of a combination of factors, including a mild inflammatory reaction with edema, expansion of the horny layer, and consequent narrowing of the pores.

Less effective agents studied were a mixture of 3% salicylic acid and 97% talcum, and exchange resins. Zirconium salts have been incorporated in several antiperspirant preparations.

The underlying mechanism of malodorous sweating requires further investigation. However, it is certain that effective deodorants include those that show antibacterial activity on the skin and on the hair follicles, which are the sites of adherence of odor-producing material. Aluminum salts show antibacterial activity. Chlorophyll has no significant deodorant effects. Externally applied antibiotics and soaps containing hexachlorophene or tetramethyl-thiuramdisulfide (TMTD) produce deodorant effects for many hours.

NORMAN HO

CURRENT LITERATURE

. . . also calling your attention to the following articles appearing in recent hospital and pharmaceutical journals

. . . . . .

ADMINISTRATION

—Dispensing

Hassan, William E., Jr.: Six Ways to Provide Pharmacy Coverage After Normal Pharmacy Hours, *Hospitals* 32:54 (May 16) 1958.

AMERICAN SOCIETY OF HOSPITAL PHARMACISTS

Bowles, Grover C., Jr.: Society of Hospital Pharmacists Announces New American Formulary Service, *Modern Hosp.* 90:86 (June) 1958.

————: Hospital Pharmacists Meet—Safer Drug Handling in Hospitals Explored, *Hospitals* 32:108 (May 16) 1958.

DISASTER PREPAREDNESS

Foster, Thomas A.: Hospital Pharmacy Disaster Planning, *Hosp. Progress* 39:139 (May) 1958.

INTERNATIONAL

Anderson, Ron. A.: Hospital Pharmacy in Australia and the United States, *Am. Profess. Pharm.* 24:396 (May) 1958 and 24:474 (June) 1958.

Moir, J. Glen: I.P.S.F. Student Exchange Programme, *Hosp. Pharm.* (Canada) 11:125 (May-June) 1958.

INSTITUTES

Anon.: C.S.H.P. Institute on Hospital Pharmacy, *Hosp. Pharm.* (Canada) 11:127 (May-June) 1958.

PROFESSIONAL RELATIONS

Mees, Jed L.: The Ethical Manufacturer and the Hospital Pharmacy, *Hosp. Management* 86:86 (July) 1958.

PURCHASING

Axelson, Nils G.: An Administrator's View of Purchasing, *Hosp. Management* 85:119 (June) 1958.

Godlesky, Vincent W.: Two Ways of Improving Your Purchases, *Modern Hosp.* 91:79 (July) 1958.

Pasch, John F.: A Look at Hospital Purchasing Ethics, *Hosp. Management* 86:94 (July) 1958.

SMALL HOSPITALS

Anon.: Good Drug Service Calls for Cooperation Between Hospital and Retail Pharmacists, *Modern Hosp.* 91:88 (July) 1958.

Book Reviews

► **THE EXTRA PHARMACOPOEIA (Martindale), Volume I, 24th Edition. Published by Direction of the Council of the Pharmaceutical Society of Great Britain. Pp. xxx + 1695. Price $13.00. The Pharmaceutical Press, 17 Bloomsbury Square, London W.C.I. Available in U. S. from The Rittenhouse Bookstore, 1706 Rittenhouse Square, Philadelphia, Pa.**

The new 24th edition of the *Extra Pharmacopoeia*, published under the aegis of the Pharmaceutical Society of Great Britain, provides up-to-date pharmaceutical and therapeutic information on an extensive list of new, as well as established, drugs in an easy to handle volume. Pharmacopoeias and related compendia from 19 countries (besides Great Britain) have been examined and utilized in the preparation of this outstanding reference. This new edition of "Martindale's" has been completely rewritten; the main titles are now in English instead of in Latin; a slightly larger type is used for the abstracts, thus improving legibility.

The practicing pharmacist will find the pharmaceutical data on drugs and chemical substances to be particularly helpful. A wide range of pharmaceutical literature has been examined for preparing this data. Many formulations not readily available are included in Martindale's. Information on solubility, physical properties, stability of drugs under steam sterilization conditions, etc. should be very helpful to hospital pharmacists faced with problems relating to the extemporaneous preparation of special prescriptions.

Pharmacologic and therapeutic information include the principal actions, uses and dosage, toxic effects, contraindications and antidotes, dosage forms, proprietary names, and names of the manufacturers. Much of the data is supported by succinct, authoritative abstracts from medical and technical literature.

A Supplementary List contains drugs of lesser interest or importance than those included in the general section. This list also includes some recently introduced drugs as well as substances and preparations on which information was received too late for inclusion in the general sections. The Supplementary List of proprietary preparations includes recently introduced products and also older proprietaries which could not be appropriately placed in the main section of the compendium.

Of particular interest are the special sections on antibiotics, immunologic products, and radioactive isotopes. The section on antibiotics has been arranged into three parts: the first part describes properties, pharmaceutical and pharmacological data; the second part deals with the use of these agents in specific diseases; whereas part three includes a list containing a suggested order of choice of antibiotics for treating various diseases. The section on immunologic agents has been shortened but includes information on preparations producing active immunity, those producing passive immunity, and those used in diagnostic tests. The radioisotopes section deals with the therapeutic uses of the most important isotopes in addition to their toxic effects, hazards, precautions, and supply.

The addition of the new anti-diabetic agents, cytotoxic agents, diuretics, tranquilizers, antihypertensives, etc. makes *The Extra Pharmacopoeia* as up-to-date as can be expected from a bound volume containing information on medicinal substances. Thus, hospital pharmacists will find *The Extra Pharmacopoeia* a particularly valuable reference in providing information service to their medical and nursing staffs.

CLIFTON J. LATIOLAIS

► **INTRODUCTION TO PROTEIN CHEMISTRY, by Sidney W. Fox and Joseph F. Foster. Published by John Wiley & Sons, Inc., New York. 459 pages. Price $9.50.**

While reading this book, one finds oneself surprised by the fact that apparently such a vast field of science has been developed on such a special subject as proteins. In some 450 pages the authors were only able to write a comprehensive introduction, in which the fundamentals of protein chemistry are treated in a readable and logical manner. Where necessary, ways are indicated in which the knowledge is basic to other fields, such as biology, nutrition and food technology. For the hospital pharmacist the following chapters are of particular interest: Metabolic and nutritive significance of the amino acids (26 pages); naturally occurring peptides (13 pages, important substances with peptide-structures are folic acid, glutathione, hypertensin and antibiotics such as penicillin, bacitracin and the polymyxins); the solubility behavior of proteins (26 pages); blood proteins (26 pages); hormonal proteins (13 pages, discussed are histamine, epinephrine, thyroxine, insulin, glucagon, ACTH, oxytocin, and vasopressin); enzymes (20 pages); and additional proteins with fundamental biological function (15 pages, rather briefly are discussed antigens, antibodies, hapten, toxins, allergens, and nucleoproteins). Each chapter is followed by a list of selected references, the most recent ones being of the first half of 1957. Printing and layout of the book are excellent.

J. WOUTER HUISMAN

► **NEW AND NONOFFICIAL DRUGS, 1958. Published under the direction and supervision of the Council on Drugs, American Medical Association, by J. B. Lippincott Co., Philadelphia. 7½" x 5", xxx + 645 pages. Price $3.35**

This book includes all Council monographs on commercially available evaluated drugs that have appeared in *The Journal of the American Medical Association* and have not been included in the book for more than 20 years. The 1958 edition contains 48 new monographs on drugs and, altogether, monographs for more than 600 agents. Trade names are listed at the end of each monograph and in the index as a further aid in prescribing. A generic listing of available preparations and their strengths and sizes is provided with each monograph.

As new experience and information becomes available, monographs describing previously evaluated drugs are revised in the light of changing knowledge; such revisions are first published in *The Journal* of the A.M.A.

► **YEAR BOOK OF DRUG THERAPY, 1957-1958 series. Edited by Harry Beckman, M.D. Published by Year Book Publishers, Inc., Chicago, Ill. 8" x 5½", 518 pages. Price $7.50.**

The Year Book of Drug Therapy is one of a series of Practical Medicine Year Books published annually, and contains abstracts of articles published in various professional journals from September 1956 to September 1957.

New developments in the field of drug therapy are abstracted under such headings as: Cardiovascular Diseases, Corticotropin and the Cortisones, Gastroenterologic Disorders, etc. New uses of known drugs, occasional reports on drugs not yet commercially available, and specific therapy with familiar drugs are some of the types of information in this book.

Consulting WITH BOWLES

GROVER C. BOWLES JR., *Baptist Memorial Hospital, Memphis, Tennessee*

► What is the possibility of pharmacists in the future being trained to procure, store, and dispense radioisotopes?

It has been reported that some 1,900 physicians and medical institutions have been licensed to use radioactive isotopes and nearly one million patients have received radioactive pharmaceuticals, either diagnostically or therapeutically. Thus it is reasonable to believe that the use of these materials will continue to increase. Undoubtedly many hospital pharmacists will be expected to procure, store, and dispense radioactive isotope pharmaceuticals. Many progressive hospital pharmacists have already completed courses in the handling of radioactive isotopes. Whether or not the "hot lab" will be found in tomorrow's hospital pharmacy I do not know. However, I am sure that hospital pharmacists in the future will need to be familiar with the terminology, and precautions of handling and dispensing of radioactive pharmaceuticals.

► What criteria should be employed in choosing competitive products of several manufacturers?

Quality, time required for delivery, and price should be the criteria employed in choosing competitive products of several manufacturers. These factors are listed in the order of their importance.

► Where can we obtain more information concerning incompatibilities of injectables?

Two charts dealing with this problem are available from the Parenteral Products Division, Mead Johnson and Company, Evansville, Indiana. One chart deals with the physical compatibilities of some intravenous admixtures and the second chart deals with the physical compatibilities of some intramuscular admixtures. As pointed out on the chart, the criterion used for compatibility has been the presence of ready visible amounts of particulate matter. The solutions have not been examined for either pharmacologic or chemical incompatibilities.

These charts have been abstracted from a study done by Robert C. Bogash, Chief of Pharmacy Service, Lenox Hill Hospital, New York City, and represent an expansion of the work originally reported by Mr. Bogash in *The Bulletin of the American Society of Hospital Pharmacists*, 12:445 (July-August) 1955. The complete study done by Mr. Bogash will be published in a forthcoming issue of the AMERICAN JOURNAL OF HOSPITAL PHARMACY.

► How do we go about getting a hospital pharmacist appointed to our State Board of Pharmacy?

The first thing to do is to check your state pharmacy law. The State Board of Pharmacy is established by this law and the method of appointment and terms of the members will be found spelled out in detail. Copies of the State Pharmacy Law may be obtained from the Secretary of the State Board of Pharmacy.

If pharmacists engaged in hospital practice are eligible for appointment to the Board (in some states only retail pharmacists are eligible), the next step would be to formally submit the name or names of unusually qualified hospital pharmacists to the governor at the proper time. Of course, support from the state and local pharmaceutical associations, the state hospital association and others, as well as letters supporting the appointment from prominent citizens would be most helpful.

In recent years, hospital pharmacists have been appointed to state boards of pharmacy with increasing frequencies. I. T. Reamer, Don E. Francke, Edward Tighe, and Oliver Steppig (deceased) are hospital pharmacists who have served on their State Board of Pharmacy.

► What precautions should be observed when compressed gases such as nitrogen, carbon dioxide, and oxygen are used in the pharmacy?

The following safety precautions should be observed:

1. Compressed gases should be used by authorized personnel only.
2. Large cylinders should be chained to the wall. Small cylinders, "lecture-size," should be secured with a cylinder foot-ring stand.
3. Be careful not to upset the cylinder or hit the regulator or valve violently. Breaking off the cylinder valve may release a gas jet sufficiently to drive the cylinder like a projectile.
4. Be sure that the identity of the gas is known. Remove wrappings from cylinders so that label and colors are clearly visible.
5. Open cylinder valve slowly with the valve outlet pointing away from you.
6. Do not use oil or grease on oxygen tanks or equipment.
7. Smoking or the use of flames must not be permitted in areas where oxygen is being used.
8. Do not use soap suds to detect leaks from high-pressure connections.
9. Do not use corroded equipment.
10. Be sure that pressure gauges are operating properly. Have defective gauges repaired by authorized personnel only.

DRUG EVALUATIONS

by the Council on Drugs of the American Medical Association

► THE FOLLOWING MONOGRAPHS and supplemental statements on drugs have been authorized by the Council on Drugs of the American Medical Association for publication and inclusion in *New and Nonofficial Drugs*. They are based upon the evaluation of available scientific data and reports of investigations. In order to make the material even more valuable, dosage forms and preparations of individual drugs have been added to the monographs. These dosage forms and preparations were not taken from material published in the *Journal of the American Medical Association* by the Council on Drugs; rather, they were obtained from such manufacturers' brochures, news releases, etc., which were available to us at the time of publication. An attempt has been made to make the list of dosage forms as complete as possible. However, no guarantee can be made that the list of preparations is complete and it is suggested that hospital pharmacists consult manufacturers' releases for additional dosage forms and preparations.

The issues of the *Journal of the American Medical Association* from which each monograph has been taken is noted under each monograph. Monographs in this issue of the JOURNAL include those published in the *Journal* to June 21, 1958.

Notice

New and Nonofficial Drugs 1958 is now available from your local bookstore and from the publishers, J. B. Lippincott Company, Philadelphia, Pa. This 1958 edition contains monographs of drugs evaluated by the Council on Drugs of the American Medical Association and published in the Journal of the A.M.A. to January 1, 1958. The index listed below contains those drugs evaluated and published between January 1, 1958 and June 1, 1958.

Index

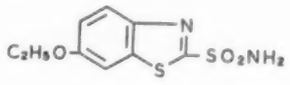
TO DRUGS EVALUATED IN THIS ISSUE

Index

TO EVALUATED DRUGS IN THE JANUARY THROUGH JULY 1958 ISSUES OF THE AMERICAN JOURNAL OF HOSPITAL PHARMACY.

Ethoxzolamide — Cardrase®

ETHOXZOLAMIDE is 6-ethoxy-2-benzothiazolesulfonamide.—The structural formula of ethoxzolamide may be represented as follows:



Actions and Uses

Ethoxzolamide is a diuretic agent with actions and uses similar to those of the chemically related sulfonamide compound, acetazolamide. Both drugs are potent inhibitors of carbonic anhydrase and are believed to influence fluid mobilization by the same basic mechanism of action. Therapy with either results in alkalinization of the urine and a mild degree of metabolic acidosis. Available evidence indicates that the initiation of diuresis may be achieved with smaller doses of ethoxzolamide than of acetazolamide. On a weight basis, ethoxzolamide appears to be approximately twice as active as acetazolamide. Both have approximately the same duration of action, the effects lasting about 8 to 12 hours after a single oral dose.

Ethoxzolamide is used to produce diuresis in patients with mild to moderate congestive heart failure. It may also be used in conjunction with mercurial diuretic agents for the treatment of the more severe forms of heart failure. Such combination therapy may permit a reduction in the dosage and frequency of mercurial administration; in certain cases, it may even be possible to eliminate the need for the mercurial diuretic.

Ethoxzolamide decreases intraocular pressure by inhibiting the formation of aqueous humor. It is, therefore, useful in the treatment of glaucoma, particularly acute glaucoma. The drug is usually not employed alone but is given concomitantly with cholinergic miotics because such therapy appears to be additive. The long-term effectiveness of carbonic anhydrase inhibitors remains to be established.

Ethoxzolamide has been employed to reduce the incidence of convulsive attacks in epileptic patients subject to grand mal and petit mal seizures. Although beneficial effects have been reported in certain cases, there is insufficient evidence to establish the usefulness of the drug as an antiepileptic agent.

In general, ethoxzolamide appears to be well tolerated. The most commonly reported side-effects include nausea, dizziness, and numbness and paresthesias of the fingers and toes or at the mucocutaneous junctions of the lips or anus. Other less frequently reported reactions include drowsiness, fatigue, headache, and dryness of the mouth. Long-term therapy, such as is employed in chronic glaucoma, may lead to anorexia and weight loss. Side-effects generally subside or disappear with a reduction in dosage.

Ethoxzolamide should be used cautiously in patients with hepatic cirrhosis, since it may induce episodes of disorientation. The drug is contraindicated in patients with renal failure, hyperchloremic acidosis, Addison's disease, and in any condition in which sodium and/or potassium levels are depressed.

Dosage

Ethoxzolamide is administered orally. For diuresis in mild to moderate congestive heart failure or in combination with mercurial diuretics in severe heart failure, a single dose of 62.5 to 125 mg. is given in the morning after breakfast for three consecutive days of each week; this dose may also be given on alternate days. In resistant cases, single doses of as much as 250 mg. may be required. For use in glaucoma, the dosage ranges from 62.5 to 250 mg. two to four times daily, depending upon the individual response in intraocular pressure. As is true for acetazolamide, the administration of ethoxzolamide should be intermittent rather than continuous. Dosage for the prophylaxis of epileptic seizures is not established, but daily amounts up to 750 mg. have been employed.

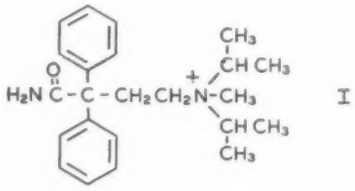
Preparations: tablets 125 mg.
Applicable commercial name: Cardrase.
The Upjohn Company cooperated by furnishing scientific data to aid in the evaluation of ethoxzolamide.
J. Am. Med. Assoc. **167**:995 (June 21) 1958.

Preparations

Tablets Ethoxzolamide (Cardrase) 125 mg.

Isopropamide Iodide — Darbid® Iodide

ISOPROPAMIDE IODIDE is (3-carbamoyl-3,3-diphenylpropyl)-diisopropylmethylammonium iodide.—The structural formula of isopropamide iodide may be represented as follows:



I

Actions and Uses

Isopropamide iodide, a synthetic anticholinergic compound, produces the peripheral effects of atropine and the belladonna alkaloids. Although it is chemically classified as a quaternary ammonium compound, the drug does not elicit sympathetic ganglionic blocking effects except at doses greatly in excess of therapeutic levels. Isopropamide differs from

other anticholinergics chiefly with respect to duration of action. Since the drug apparently possesses an inherently prolonged action, antisecretory and spasmolytic effects can be maintained with the administration of single doses at intervals of 12 hours. It is useful as an adjunct to the management of peptic ulcer and other conditions of the gastrointestinal tract that are characterized by hypermotility and hyperacidity. Side-effects referable to therapy with isopropamide are those of anticholinergics in general and include dryness of the mouth, blurring of vision, and difficulty in urination. The drug is contraindicated in patients with glaucoma, prostatic hypertrophy, obstruction at the bladder neck, stenosing peptic ulcer, or pyloric or duodenal obstruction.

Dosage

Isopropamide iodide is administered orally. Dosage should be adjusted to the needs of the individual patient as determined by clinical response and appearance of side-effects. The usual dose for adults is 5 mg. every 12 hours.

Preparations: tablets 5 mg.
Applicable commercial name: Darbid.
Smith, Kline & French Laboratories cooperated by furnishing scientific data to aid in the evaluation of isopropamide iodide.

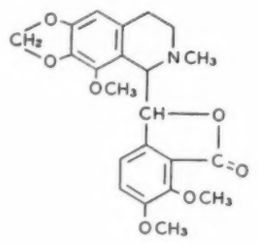
J.Am.Med.Assoc. **167**:993 **(June 21) 1958.**

Preparations

Tablets Isopropamide (Darbid) Iodide 5 mg.

Noscapine — Narcotine, Nectadon®

NOSCAPINE is 2-methyl-8-methoxy-6,7-methylenedioxy-1-(6,7-dimethoxy-3-phthalidyl)-1,2,3,4-tetrahydroisoquinoline.—The structural formula of noscapine may be represented as follows:



Actions and Uses

Noscapine is one of the isoquinoline alkaloids of opium. Except for morphine, it is the most abundant of the opium alkaloids, occurring to the extent of 6 percent in the seed capsules of Papaver somniferum. Because of its derivation from the opium poppy, the drug was formerly known as narcotine and was employed empirically in the past as an analgesic, hypnotic, and sedative. More recent evidence has shown that the drug bears little similarity, either chemically or pharmacologically, to morphine or the narcotic alkaloids of opium; hence, it has been renamed noscapine.

Noscapine shows papaverine-like effects on smooth muscle, causing coronary vasodilation in animals and, in large enough doses, bronchodilation. In man, there are no marked symptoms after administration of moderate doses. The drug produces none of the usual opiate-like effects such as constipation, miosis, blood pressure changes, and respiratory depression. Analgesia, hypnosis, and sedation are negligible or nil. Noscapine is rapidly absorbed from the gastrointestinal tract. Little is known about its metabolic fate or excretion.

The pharmacological action upon which the clinical use of noscapine is based resides in its ability to suppress the cough reflex in experimentally induced cough in animals and human volunteers and in patients with respiratory disease. The drug reduces the frequency and intensity of coughing paroxysms. Its antitussive potency under these experimental conditions is approximately equal, milligram for milligram, with that of codeine, both drugs having approximately the same onset and duration of action. In humans, clinical experience with the drug in cough of pathological origin has not been sufficiently extensive to establish its final status.

Therapeutically effective doses of noscapine are essentially devoid of the unpleasant side-effects of codeine, and, except for occasional instances of nausea (which rarely proceed into vomiting), its side-effects are negligible. As with any antitussive agent, it should not be given in situations in which retention of respiratory secretions or exudates may be harmful.

Although noscapine is an opium alkaloid within the scope of the Harrison Act, it is exempt from requirements for order by prescription under certain conditions. However, experiments have shown that moderately large doses have no morphine-like effects in former addicts and no ameliorating effect on the severity of the morphine abstinence syndrome. Further, virtually no tolerance to the antitussive effect of the drug has been demonstrated. Hence noscapine is, for practical purposes, without addicting liability.

Dosage

Noscapine is administered orally. The usual dose is 15 to 30 mg. given three or four times daily.

Preparations: powder (bulk).
Applicable commercial name: Nectadon.
Merck Sharp & Dohme Research Laboratories, Division of Merck & Co., Inc., cooperated by furnishing scientific data to aid in the evaluation of noscapine.

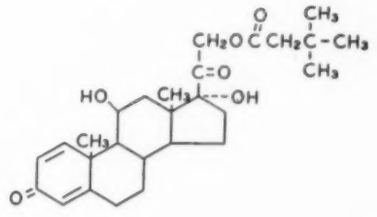
J.Am.Med.Assoc. **167**:993 **(June 21) 1958.**

Preparations

Powder Noscapine (Nectadon) 25 ounce cans.
Suspension Noscapine (Consol) 5 mg. per 5 ml.
Troches Noscapine (Consol) 5 mg.

Prednisolone Butylacetate — Hydeltra-T.B.A.®

PREDNISOLONE BUTYLACETATE is prednisolone *tert*butylacetate.—$\Delta^{1,4}$-Pregnadiene-3,20-dione-11β,17α-21-triol *tert*butylacetate. The structural formula of prednisolone butylacetate may be represented as follows:



Actions and Uses

Prednisolone butylacetate, a very slightly soluble ester of prednisolone, is suitable for intrasynovial and soft tissue injection. The drug appears to have a slightly greater potency and a longer duration of action than the acetate or butylacetate esters of hydrocortisone. It is useful for the treatment of those painful disorders of the joints, tendons, and bursae which are usually responsive to local glucocorticoid therapy (injection). Since the drug is so slightly soluble, 24 to 48 hours may elapse after injection before relief of symptoms becomes significant. The duration of relief varies from patient to patient but averages from two to three

weeks. A continuation or even an increase in local discomfort (postinjection flare) may occur and be present for several hours after the administration of prednisolone butylacetate; however, this is usually followed by effective relief of pain and improvement in local function. Systemic steroid effects are not a problem when therapeutic doses are employed; with higher dosage, mild transient subjective improvement of joints remote from those injected has been reported. (See the general statement on glucocorticoids in New and Nonofficial Drugs.)

Dosage

Prednisolone butylacetate is administered by intrasynovial or soft tissue injection only; it should not be given by any other route. The usual techniques governing intrasynovial (intra-articular and intrabursal) injection should be observed, and a 22-gauge or larger needle should be employed. The injection site may be infiltrated with a local anesthetic if necessary. Dosage and interval between injections depend on size of joint, degree of inflammation, and individual response of the patient. For large joints such as the knee, the usual dose is 20 to 30 mg.; in smaller joints, 7.5 to 10 mg. may be sufficient. A dose of 20 to 30 mg. is usually employed for the treatment of most forms of bursitis. The suggested dose for inflammatory conditions of the tendons is 4 to 10 mg. For the treatment of ganglion, 10 to 20 mg. is injected directly into the cyst cavity.

Preparations: suspension (injection) 20 mg. in 1 cc. and 100 mg. in 5 cc.

Applicable commercial name: Hydeltra-T.B.A.

Merck Sharp & Dohme Research Laboratories, Division of Merck & Co., Inc., cooperated by furnishing scientific data to aid in the evaluation of prednisolone butylacetate.

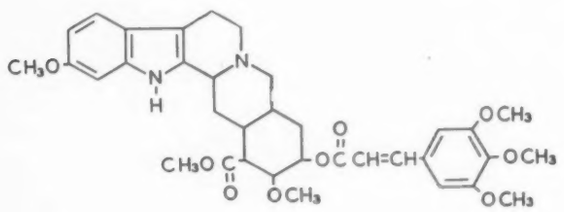
J.Am.Med.Assoc. **167**:994 (June 21) 1958.

Preparations

Injection Prednisolone Butylacetate (Hydeltra-T.B.A.) 20 mg. per ml.; 5 ml. vials.

Rescinnamine — Moderil®

RESCINNAMINE is 3,4,5-trimethoxycinnamic acid ester of methyl reserpate.—The structural formula of rescinnamine may be represented as follows:



Actions and Uses

Rescinnamine, a purified ester alkaloid of the alseroxylon fraction of species of Rauwolfia, is closely related in chemical structure and pharmacological action to reserpine. Thus, rescinnamine is useful for the management of mild, labile hypertension and as a tranquilizing agent in agitated patients with simple neuroses and frank psychoses. While clinical experience with rescinnamine is not as extensive as that with reserpine, most observations indicate that both drugs are of approximately the same order of effectiveness.

Although all the side-effects and toxic reactions that occasionally follow the administration of reserpine have been reported after therapy with rescinnamine, the incidence and severity of some of these may be less with the latter agent. Sedation and bradycardia, in particular, appear to occur less frequently and in milder form with rescinnamine. The incidence of other side-effects such as weakness and fatigue, nasal congestion, dizziness, confusion, increased appetite, and weight gain is about the same with both agents; in some patients, the severity of these effects may be slightly less with rescinnamine than with reserpine. Both drugs should be used with the same precautions, and both are subject to the same contraindications. (See the monograph on reserpine in New and Nonofficial Drugs.)

Dosage

Rescinnamine is administered orally. For the treatment of mild hypertension or simple neuroses, initial doses of 0.5 mg. twice daily for two weeks have been employed. Thereafter, daily dosage requirements are either reduced or increased by increments of 0.25 mg., depending on therapeutic response and appearance of side-effects. While information available to date is not adequate to establish the dosage of rescinnamine for the treatment of institutionalized psychotic patients, daily amounts ranging from 3 to 12 mg. have been employed, apparently with satisfactory results.

Preparations: tablets 0.25 mg. and 0.5 mg.

Applicable commercial name: Moderil.

Pfizer Laboratories, Division of Chas. Pfizer & Co., Inc., cooperated by furnishing scientific data to aid in the evaluation of rescinnamine.

J.Am.Med.Assoc. **167**:994 (June 21) 1958.

Preparations

Tablets Rescinnamine (Moderil) 0.25 mg. and 0.5 mg., scored.

Anemias — Current Status of Therapy in

Report to the Council

The Council has authorized publication of the following report. Nonproprietary terminology is used for all drugs that are mentioned; when such terminology is not considered to be generally well known, its initial appearance is supplemented by parenthetic insertion of names known to be applied to commercial preparations.

H. D. KAUTZ, M.D., *Secretary*

Current Status Of Therapy In Anemias

HERBERT C. LICHTMAN, M.D., BROOKLYN, N. Y.

Anemia, like any other useful sign of disease, is most efficiently corrected when therapy is directed at the specific pathological process or deranged physiological mechanism responsible for its development. The administration of a blood transfusion is the only direct treatment for anemia. It is effective in elevating the hemoglobin concentration, although often only temporarily, in a wide variety of disease states, even when it is employed without regard to the pathogenesis of the anemia. This is somewhat similar to the indication for an alcohol sponge bath for the patient with excessively high fever or the use of tracheotomy for acute laryngeal edema. All are useful, sometimes lifesaving, direct therapeutic attempts to relieve an abnormal sign of disease without altering the causative factors.

Anemia is usually defined as the state in which there is found a reduction in the concentration of hemoglobin, the number of erythrocytes, or the volume of packed red blood cells in a specific quantity of the circulating blood. The mean values for these measurements found in healthy adult males, adult females, and children of various ages differ significantly, as indicated in table 1.

No single value can be used, therefore, as a standard of reference ("100% level") for hemoglobin concentration, red blood cell count, or hematocrit for all individuals. Thus, many "slight anemias" of females are seen to be spurious when the hemoglobin values are judged in the correct frame of reference.

From the Department of Medicine, College of Medicine at New York City, State University of New York.

Since anemia is so often an early sign of disease, its presence should be established with care. The methods available for the detection of anemia include the red blood cell count, the determination of hemoglobin level, and the measurement of the volume of packed red blood cells (the hematocrit). Of the three, the enumeration of red blood cells is the least accurate and the most difficult and time-consuming to perform (table 2). It would seem, therefore, that the red blood cell count should not be used as a screening procedure for anemia but should be determined only when it is of interest to calculate the red blood cell indexes.

TABLE 1.—*Comparison of Mean Values in Clinical Examination of Blood of Children and Adults*

Age	Red Blood Cell Count, Million/Cu. Mm.	Hemoglobin, Gm./100 Ml.	Packed Red Blood Cells, Ml./100 Ml.
First day	5.1±1.0	19.5± 5.0	54.0±10.0
3-5 mo.	3.8 - 5.2	9.9 - 14.5	36.0
1-10 yr.	4.0 - 5.0	11.0 - 13.0	30 - 40
Adult female	4.8±0.6	14.0± 2.0	42.0± 5.0
Adult male	5.4±0.8	16.0± 2.0	47.0± 7.0

Anemia will develop as a consequence of increased blood loss from the body, excessive blood destruction, impaired blood cell formation, or combinations of these mechanisms (table 3). The accurate simultaneous measurement of the hemoglobin concentration, volume of packed red blood cells, and the erythrocyte count, plus a careful examination of a properly spread and stained blood film, will permit the calculation of the mean corpuscular volume, the mean corpuscular hemoglobin concentration, and the detection of unusual types of erythrocytes, such as spherocytes, schistocytes, sickle cells, target cells, stipple cells, and ovalocytes. A morphologic classification of anemias, which is of great value in diagnosis and therefore in therapy, can be constructed on the basis of the corpuscular constants and the appearance of the erythrocytes (table 4).

TABLE 2.—*Comparison of Accuracy of Three Laboratory Methods of Detecting Anemia*

Method	Minimal Error, 2 C.V., * %	Usual Error, 2 C.V., %	Usual Error Limits	True Value
Red blood cell count, million/cu. mm.	±11	±30†	3.5 - 6.5	5.00
Hemoglobin,‡ Gm./100 ml.	± 2	± 5	14.3 - 15.7	15.00
Packed red blood cells, ml./100 ml.	± 1	± 1	49.5 - 50.5	50.00

* Coefficient of variation.
† One pipet, one chamber.
‡ Photoelectric colorimeter.

Microcytic Hypochromic Anemias

For this discussion, an anemia is classified as microcytic hypochromic when the mean corpuscular volume is below 80 cu. μ and when the mean corpuscular hemoglobin concentration is below 30 percent. This group includes all the anemias which will respond to the administration of iron. Stated in another way, iron is an effective therapeutic agent only in this category. Iron deficiency may develop as a result of chronic blood loss in the fully grown individual or as a result of diet nutritionally inadequate for iron salts in the growing child. In both, the erythrocytes will be small and appear pale and poorly filled with hemoglobin on the stained blood film. Sometimes the microcytic hypochromic anemia may be the first sign of occult blood loss. This is especially true in the adult male who does not have the repetitive assault upon his iron reserves, as does the female, incident to gestation or menstruation. Here the finding of microcytic hypochromic anemia makes mandatory a careful scrutiny for chronic bleeding, such as the easily overlooked blood loss which results from gastrointestinal ulceration.

TABLE 3.—*Etiological Classification of Anemias*

I. Loss of Blood
  A. Acute
  B. Chronic
II. Excessive Destruction of Erythrocytes
  A. Intracorpuscular defect
  B. Extracorpuscular defect
III. Impaired Production of Erythrocytes
  A. Deficiency of substances necessary for erythropoiesis
    1. Iron
    2. Cyanocobalamin (vitamin B_{12})
    3. Folic acid
    4. Protein
    5. Ascorbic acid (vitamin C)
    6. Other vitamins
    7. Trace elements
  B. Congenital defects in erythropoiesis
    1. Abnormal hemoglobin diseases
    2. Thalassemia
    3. Congenital spherocytosis
  C. Acquired defects in erythropoiesis
    1. Infection
    2. Renal disease and other chronic disease
    3. Noxious agents, lead, irradiation, drugs
    4. Endocrine abnormalities
    5. Bone marrow replacements or infiltration
    6. Splenic disorders

Iron deficiency anemia is treated by the administration of iron in quantities that are adequate and in a form that is well tolerated and utilized by the patient. Oral administration of ferrous salts is the preferred route in all but a small percentage of patients. This latter group, for reasons discussed later, requires parenteral administration of iron compounds.

The effective dose of iron administered is limited by the restricted capacity of the gastrointestinal tract to absorb iron. The normal individual may absorb approximately 5 to 15 percent of ferrous iron and 2 to 10 percent of ferric iron salts, when ingested in quantities up to 100 mg. per day. Above this level the fraction of iron absorbed decreases as the total amount administered is increased.

When iron deficiency exists, the percentage absorbed is probably increased considerably. The contents of the intestinal lumen also have an effect on iron absorption, i. e., the tenfold to twentyfold increase in absorption resulting from the simultaneous administration of ascorbic acid or the decrease in the availability of iron for absorption when insoluble salts are formed with phosphates or other compounds.

In general, an inorganic salt of iron in the reduced form, such as ferrous sulfate, is perfectly adequate for the treatment of iron deficiency anemia. It may be administered orally in a dosage of about 1 Gm. per day and will supply about 200 mg. of elemental iron, of which at least 20 mg. will be absorbed. A schedule such as 330 mg. of ferrous sulfate given after each meal, with 50 to 100 mg. of ascorbic acid, is frequently employed. There seems to be no advantage to the addition of cobalt, copper, molybdenum, intrinsic factor, cyanocobalamin (Berubigen, Bevatine, Bevidox, Bexii, Cobione, Dodecabee, Dodex, Hemomin, Rametin, Redisol, Rubramin, Sytobex, Vibalt, Vitamin B_{12}), folic acid

TABLE 4.—*Morphologic Classification of Anemias*

Index	Method for Calculation	Normal	Macrocytic	Microcytic	Hypochromic
Mean corpuscular volume, cu. μ	$\frac{\text{hematocrit} \times 10}{\text{red blood cells (million/cu. mm.)}}$	82-92	Above 94	Below 80	...
Mean corpuscular hemoglobin concentration, %	$\frac{\text{hemoglobin (Gm./100 ml.)} \times 100}{\text{hematocrit}}$	32-36	...	...	Below 30

(Folic Acid, Folvite), or other vitamins or trace metals. The higher cost of "shotgun" preparations and the smaller dose of elemental iron usually supplied with such mixtures actually are disadvantageous.

Gastric irritation, diarrhea, and/or constipation, which develop in some patients receiving iron therapy, are often avoided by the administration of smaller doses at the onset of therapy with a gradual increase to full dosage within a period of a week or two. Occasionally, ferrous gluconate, ferrous carbonate, or ferric ammonium citrate may be found less irritating than ferrous sulfate and better tolerated by specific patients. However, larger total daily dosages are required of these salts in order to supply equivalent quantities of elemental iron.

For infants to whom solid medication cannot be administered, iron ammonium citrate in water and glycerin is employed at dosages of about 200 mg. three times each day. When the infant is about one year old, two or three times this dose is given. An elixir of ferrous sulfate (to prevent oxidation to ferric form), with the following ingredients and amounts, is often employed: 0.6 cc. of dilute hypophosphorus acid, 3 Gm. of ferrous sulfate, 30 Gm. of dextrose, and chloroform water, N. F., to make 120 cc. A dose of 4 cc. is given three times daily after meals.

When oral administration in any form is impractical in the infant, the intramuscular injection of iron, as in the form of an iron-dextran complex (Imferon), is of real value. One cubic centimeter of this preparation contains 50 mg. of elemental iron which, when injected deep into the muscle, is freely available to the iron pool of the body. Its administration has been free of adverse side-reactions and can be recommended in all instances when the oral route of iron administration is ineffective or impractical. When given parenterally, the total dose of iron administered should be calculated with care. Since practically no iron is lost from the body once it enters the tissues, except through blood loss, the parenteral administration of great excesses of iron over long periods of time will lead to tremendous iron concentrations in the body and conceivably diffuse tissue injury (i. e., exogenous hemochromatosis).

The dose of iron employed depends on the deficit in total body hemoglobin, which can be calculated from the body weight and peripheral blood hemoglobin concentration. For example, in an infant one year of age weighing 9 kg. (20 lb.), the hemoglobin concentration is found to be 6 Gm. per 100 ml. of blood. If one considers a hemoglobin level of 13.0 Gm. per 100 ml. of blood to be normal at this age, a deficit of 7 Gm. per 100 ml. of blood exists. The blood volume at this age may be expected to be 80 ml. per kilogram of body weight or 720 ml. in this instance. The total body hemoglobin deficit is found to be $\frac{7 \text{ Gm.} \times 720 \text{ ml.}}{100 \text{ ml.}}$ or 50.4 Gm. Since each gram of hemoglobin utilizes 3.4 mg. of iron, 50.4 X 3.4 or 171.4 mg. of iron is required to restore the hemoglobin level to normal. An additional 20 percent is usually given in order to reconstitute the iron stores of the body. This would increase the dose to approximately 200 mg. of iron, which can be administered intramuscularly in 1-cc. injections (50 mg. per cubic centimeter) daily for four days. Simple charts, which are based on calculations similar to these, are available for the determination of the correct dose of iron given parenterally. They relate total dose of iron to the weight of the patient and his initial hemoglobin concentration.

Saccharated iron oxide (Proferrin) is another form of iron available for parenteral use. This is given intravenously, diluted in saline solution, at doses of 50 to 100 mg. per injection, to adults. Smaller amounts are recommended for children. Since its wide use during the past several years, it has been demonstrated to be more effective and far less toxic than earlier intravenously administered iron preparations had been. However, as with all forms of iron given parenterally, a regular incidence of toxicity occurs which requires one to exercise extreme care with each administration. Perhaps more important is the necessity for a compelling indication for the use of this form of therapy as opposed to oral treatment. These indications in an adult include a malabsorption syndrome, making oral therapy with iron preparations ineffective, and extreme sensitivity of the gastrointestinal tract to iron salts because of intrinsic disease or idiosyncrasy.

TABLE 5.—*Disorders Associated with Megaloblastic Anemia*

Disease	Effective Therapeutic Agents
Pernicious anemia	Cyanocobalamin
Nutritional macrocytic anemia	Cyanocobalamin in some cases and folic acid in others
Sprue, idiopathic steatorrhea	Cyanocobalamin and/or folic acid
Total gastrectomy	Cyanocobalamin
Intestinal strictures, blind loops	Surgical correction, broad-spectrum antibiotics, cyanocobalamin, folic acid
Diphyllobothrium latum infestation	Cyanocobalamin
Megaloblastic anemia of infancy	Folic acid, ascorbic acid
Megaloblastic anemia of pregnancy	Folic acid
Tropical macrocytic anemia	Folic acid and/or cyanocobalamin
Achrestic anemia	Folic acid

Another cause of microcytic hypochromic anemia is thalassemia. In this hereditary disorder there exists a congenital defect in erythropoiesis. Inadequate numbers of red blood cells are produced, and those that are found are abnormal. They vary a great deal in size and shape; many target cells and small fragmented erythrocytes (schistocytes) are seen as well as normoblasts and stipple cells. Since the survival time of these cells in the circulation is shortened, two factors are present to account for the anemia: inadequate production and excessive hemolysis. At times, there occurs in these patients the complicating factor of an extracorpuscular hemolytic state which offers an additional therapeutic challenge. In this disease, in spite of the resemblance to iron deficiency anemia, administered iron is not beneficial and actually may be harmful. Iron stores are usually excessive. It is the utilization of the available iron which seems to be disturbed.

The treatment for thalassemia is symptomatic. Transfusions are administered when the hemoglobin level falls below a critical point at which symptoms of anemia become manifest. Although this varies widely in individual children with this disease, in general, a hemoglobin value of less than 7.0 Gm. per 100 ml. of blood is the usual indication for transfusion. It is not practical to attempt to maintain the hemoglobin at normal levels by transfusion and actually is harmful. Not only is the risk of transfusion reaction and serum hepatitis increased, but the large numbers of transfusions required only seem to speed up the development of hemosiderosis and finally of hemochromatosis, which develops eventually in patients with thalassemia major and which is the ultimate cause of death in many of these children. In selected instances, splenectomy has been found to be effective in thalassemia when an extracorpuscular hemolytic anemia exists.

Macrocytic Anemias

For this discussion, an anemia is classified as macrocytic when the mean corpuscular volume is greater than 94 cu. μ. These anemias can be divided into two large groups: (1) those associated with megaloblastic erythroid precursors in the bone marrow and (2) those associated with normoblastic erythroid precursors. The megaloblastic anemias form a large group of entities with the following common characteristics: macrocytic normochromic erythrocytes, megaloblastic erythropoiesis, leukopenia, thrombocytopenia, and dramatic therapeutic response to specific antianemic preparations. Depending upon the pathogenesis of the disorder, such preparations include cyanocobalamin, folic acid, and ascorbic acid.

Pernicious anemia and related disorders are usually

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readily diagnosable when patients are seen in hematological relapse. A diagnosis of pernicious anemia, sprue, and megaloblastic anemia incident to total gastrectomy demands therapy for the remainder of the life of the patient. A definitive diagnosis therefore should be established before therapy is undertaken, since partial remission induced by suboptimal therapy can make the diagnosis difficult to establish. Table 5 includes a list of the different disorders often associated with megaloblastic anemia and the usually effective therapeutic agents.

Pernicious Anemia.—For patients in relapse, cyanocobalamin is the drug of choice in this disease. It is administered intramuscularly in doses of about 30 mcg. daily until a good hematological response is observed, usually for about two weeks. If the number of reticulocytes has not risen within the first 10 days, the correctness of the diagnosis should be suspected. Within two weeks the hemoglobin level, hematocrit, and red blood cell values should rise considerably. The percentage of increase is usually proportional to the severity of the anemia prior to therapy; that is, greater gains will be made in the more anemic patients. After two weeks the dose may be reduced to 30 mcg. given once or twice per week. Maintenance therapy is required for the life of the patient and may be adequately carried out with 45 to 60 mcg. of cyanocobalamin injected intramuscularly at intervals of four to six weeks. When severe combined systemic disease (posterolateral sclerosis) is found, it is recommended that a larger dose of cyanocobalamin be given at more frequent intervals.

Liver extract is equally effective in pernicious anemia when administered in comparable dosage; i. e., one unit of liver extract is equivalent to one microgram of cyanocobalamin. There is no real evidence that liver extract has any more value in this disease than can be accounted for by its cyanocobalamin content. Since it is more painful to inject, allergic reactions do occur in some patients; and since larger volumes are required for comparable cyanocobalamin content, it is not as desirable as cyanocobalamin.

Oral administration of cyanocobalamin alone is ineffective, because the basic defect in pernicious anemia is the absence of gastric intrinsic factor required for its absorption. Exceptionally large oral doses (3,000 mcg.) are capable of inducing remission, but the expense of this form of therapy precludes its use.

Cyanocobalamin, combined with potent intrinsic factor from animal sources, can be used orally to induce remission and can maintain patients in good health for long periods. This form of therapy is not yet considered as reliable as parenteral therapy with cyanocobalamin alone because of a wide variation in the potency of various intrinsic factor concentrates and because of the uncertainty of the stability of some of these preparations when stored. For these reasons, at this time such therapy is not considered suitable for routine use.

Folic acid is contraindicated in pernicious anemia, and iron is required only when a combined iron deficiency exists. However, folic acid is indicated for the treatment of megaloblastic anemia of pregnancy, megaloblastic anemia of infancy, some cases of sprue, nutritional megaloblastic anemia, tropical macrocytic anemia, and refractory megaloblastic anemia. The usual dose is 5 to 20 mg. daily, administered orally. Parenterally administered preparations, such as sodium folate (Sodium Folvite), are available for use in infants or in adults too ill to tolerate oral therapy. In the megaloblastic anemias of infancy and pregnancy, therapy is usually indicated until hematological remission is induced, and then it may be stopped without relapse occurring. In sprue and nutritional megaloblastic anemias, the administration of folic acid may be required for long periods and sometimes indefinitely.

Macrocytic Anemias Without Megaloblastosis

Macrocytic anemias without megaloblastosis form a heterogeneous collection of disorders usually secondary to some primary disease not localized to the hematopoietic system. In chronic liver disease, which is the most common cause, the erythrocytes are large and often very thin so that increased numbers of target cells are seen. Chronic blood loss is frequent in cirrhosis of the liver, probably as a result of bleeding from esophageal varices, hemorrhoids, or peptic ulcerations. As a result, macrocytic hypochromic cells are found. Iron therapy will partially influence the hemoglobin values beneficially. The underlying liver failure is in some way responsible for most of the hemoglobin deficit, however, and this is refractory to therapy directly with any of the known hematinics.

Scurvy.—When scurvy is severe enough, it may be associated with a macrocytic anemia reputedly, in some instances, associated with megaloblastic erythropoiesis. Ascorbic acid is the specific agent in the treatment of this disorder. In this instance, leucovorin (citrovorum factor) theoretically may have a specific role in the treatment of anemia, since ascorbic acid depletion is associated with a decrease in the conversion rate of folic acid to citrovorum factor.

Anemia of Myxedema.—In the endocrine deficiency, myxedema, anemia is frequently found. The erythrocytes may be microcytic hypochromic (probably when associated with menorrhagia in females), normocytic normochromic, or macrocytic. The use of thyroid or its active principles for the treatment of the underlying hypothyroidism is frequently effective in restoring blood values to normal. Iron may be required in the depleted individual.

Normochromic Normocytic Anemias.—For this discussion, an anemia is classified as normocytic normochromic when the mean corpuscular volume is 82 to 92 cu. μ and the mean corpuscular hemoglobin concentration is 32 to 36 percent. The anemias found in this morphologic category include almost all types of anemia not already discussed.

Acute Blood Loss.—When severe hemorrhage occurs, the degree of anemia, as depicted in the peripheral blood cell counts at any one moment, is dependent upon a variety of factors. Some of these include (1) the amount of whole blood lost, (2) the original size of the vascular space, (3) the alterations which have occurred in the size of the vascular compartment, i. e., vascular contraction or expansion, (4) the amount of plasma or red blood cell regeneration, and (5) shifts in the intravascular localization of blood from one area to another, i. e., splanchnic pooling or peripheral vasoconstriction.

The hemoglobin concentration or the volume of packed red blood cells obtained from a sample of peripheral blood, therefore, will not necessarily directly reflect the total amount of blood loss. Immediately after a hemorrhage the blood values may be normal. As plasma is replaced into the vascular space, even though bleeding has ceased, the values will progressively fall for as long as 12 to 24 hours. If circulatory collapse occurs, hemoconcentration may occur, and blood cell counts may rise.

Therapy for hemorrhage includes transfusion of whole blood to replace the volume lost and measures directed at correcting the bleeding. There is no substitute equal to whole blood transfusion for the treatment of hemorrhage. Normal human plasma is used only when blood is not available, as a temporary measure to maintain circulating volume. Ideally the transfused blood should be antigenically similar to that of the recipient in regard to major group and Rh type. Crossmatching should always be performed to eliminate the possibilities of incompatibilities not detected otherwise. For the patient who has had transfusions previously, the extra precaution of employing the indirect Coombs crossmatching method is considered worth

the additional effort. Even when relatively mild, the reaction which follows in the wake of an incompatible transfusion can be disastrous for the patient who is under the physiological stress of acute hemorrhage.

Hemolytic Anemias.—Although each of the many types of hemolytic anemia occurs infrequently, the category, as a whole, is a sizable one. It is beyond the scope of this presentation to review the pathogenesis and therapy for each of the disease states associated with an excessive rate of erythrocyte destruction. Some generalizations are possible, however. All the hemolytic anemias may be considered to fall into two groups: those associated with an abnormality intrinsic in the erythrocyte as it is developed (intracorpuscular defect) and those in which the primary defect is an abnormality present in the environment of the erythrocyte, which then alters the viability of the normally produced cell (extracorpuscular defect).

The four basic measures employed in the management of hemolytic anemias include (1) administration of corticotropin (Acthar, Corticotropin, Depo-Acth) or adrenal cortical steroids, (2) splenectomy, (3) transfusion, and (4) removal of any adverse environmental factors.

Adrenal Steroid Therapy: Adrenal steroid therapy, as typified by the administration of corticotropin, cortisone (Cortisone, Cortogen, Cortone) acetate, and prednisone (Deltasone, Deltra, Meticorten), is of great value in the management of the extracorpuscular hemolytic anemias. The types most often benefited include the idiopathic, acquired hemolytic anemias with and without demonstrable antibodies, the symptomatic hemolytic anemias (those associated with malignant lymphomas, chronic lymphocytic leukemia, collagen diseases, and miscellaneous tumors), and the hemolytic states resulting from drug sensitivities. The dosage of corticotropin usually employed is 25 to 50 U. S. P. units given intramuscularly every six hours. It may be used intravenously as well. A dosage of 25 to 50 units of corticotropin, dissolved in a liter of isotonic sodium chloride solution and administered by slow drip over a period of 16 to 20 hours, may produce a rapid therapeutic response. Cortisone, in quantities up to 300 mg. per day, or prednisone, in amounts up to 100 mg. per day, is occasionally required to halt the hemolytic process in refractory cases. Usually less is required. When a response is noted, that is, when hemoglobin values rise and the indications of hemolysis disappear, the steroid dosage may be decreased slowly. A gradual weaning process is often necessary in the patient receiving adrenal steroids. The patient should be carefully observed for recurrence of hemolysis when low levels of medication are reached. Often, prolonged maintenance therapy is required at a daily dose level which varies with each patient but which should be just adequate to prevent hemolysis.

Splenectomy: Splenectomy is resorted to in patients with acquired hemolytic anemias when adrenal cortical steroids either prove ineffective or are contraindicated for some reason. In patients with hereditary spherocytosis with anemia, it is the treatment of choice. In this disorder, the hemolytic anemia is uniformly benefited, although the basic intracorpuscular defect persists. In the uncomplicated case of thalassemia or sickle cell disease, splenectomy is of no benefit. However, there are certain instances of these diseases in which transfusion requirements are excessive and in which an extracorpuscular hemolytic mechanism, which is superimposed upon the basic disease, can be demonstrated. It is only in these patients with thalassemia and sickle cell anemia that splenectomy may be beneficial.

Transfusions: Transfusions are administered to all patients with hemolytic anemia when the number of circulating erythrocytes falls to very low levels. Usually an absolute indication for blood transfusion is the finding of the hemoglobin concentration below 7.0 Gm. per 100 ml. Coronary artery disease, myocardial failure, or rapid hemolytic rates may require the use of transfusion sooner. Great caution must be exercised when administering a transfusion to patients with acquired hemolytic anemia who have autoantibodies. Occasionally, panagglutinins are present which make proper crossmatching and typing of blood extremely difficult. At times the transfusion of packed red blood cells or saline-washed erythrocytes reduces the incidence of reactions.

Removal of Adverse Environmental Factors: The removal of adverse environmental factors is the fourth measure employed in the treatment of hemolytic anemia. This refers particularly to the acquired hemolytic anemias when the pathogenesis is known. The chemotherapy of malaria or the antibiotic treatment of septicemia is, of course, the method of choice in the treatment of the hemolytic anemias associated with these diseases. It is of value to remember that the presenting sign of a disease such as subacute bacterial endocarditis may be hemolytic anemia. When a chemical agent can be implicated in the pathogenesis of hemolytic anemia, its removal from the internal or the external environment of the patient may be all that is necessary to effect a cure. Industrial exposure to naphthalene, trinitrotoluene, benzene, nitrobenzene, aniline, lead, and methyl chloride and medicinal exposure to sulfonamides, quinine, pamaquine, primaquine, and aminosalicylic acid (*p*-Aminosalicylic Acid, Pamisyl, Para-Aminosalicylic Acid, Para-Pas, Parasal, Propasa) have been implicated not infrequently in the production of hemolytic anemia. A complete medical history, taken with especial emphasis on any such industrial, household, or pharmacological exposure, is often the most important potentially therapeutic step that can be taken by the attending physician. There is no evidence to suggest that cyanocobalamin, liver extract, folic acid, or any other vitamins have any specific therapeutic benefit in the management of hemolytic anemia. Iron is not necessary, since the iron liberated by the hemolyzed erythrocytes is not lost from the body and is readily available for new hemoglobin production. The one exception to this is in the management of patients with hemolytic anemia associated with chronic hemoglobinuria, such as paroxysmal nocturnal hemoglobinuria. In this disorder, enough hemoglobin and its associated iron may be lost in the urine to necessitate supplementation with iron salts.

Anemias Due to Bone Marrow Hypofunction

For this discussion, an anemia due to bone marrow hypofunction is a disorder in which the red blood cells are usually normochromic and normocytic. The causes for bone marrow hypofunction can be considered in five groups: (1) chemical or physical injury of marrow, (2) invasion of marrow by nonhematopoietic cells, (3) metabolic interference with erythropoiesis, (4) hormonal factors, and (5) idiopathic hypofunction (table 6).

Except for the use of splenectomy in hypersplenism and hormonal replacement in endocrine deficiency states, no

TABLE 6.—*Anemias Due to Bone Marrow Hypofunction*

Chemical or Physical Injury to Marrow	
Irradiation	Heavy metals
Radioactive substances	Sulfonamides
Nitrogen mustards	Chloramphenicol
Thiourea compounds	Phenylbutazone
Benzene	
Myelophthisis Due to Presence of Abnormal Tissue in Marrow	
Metastatic neoplasms	Lipoidosis
Multiple myeloma	Osteosclerosis
Lymphoma	Myelofibrosis
Leukemia	
Metabolic Inhibition	
Uremia	Chronic liver disease
Infection	Malignancy
Hormonal Factors	
Hypersplenism	Hypothyroidism
Hypopituitarism	
Idiopathic Hypofunction	
Refractory anemia	Aplastic anemia

specific treatment exists for the anemia present in this collection of disorders. When an underlying disease such as chronic infection or lymphoma is responsive to direct therapeutic measures, the anemia will respond simultaneously. Supportive measures such as transfusion have value in the severely anemic person. A dose of 50 mg. of cobalt chloride daily has been used with some success. Although its exact mode of action is unknown, cobalt seems to behave as a stimulant to erythropoiesis. It is potentially toxic and is often poorly tolerated, causing nausea and diarrhea. Although some rise in red blood cell counts may follow its administration, subjective deterioration is frequent and its use has to be abandoned. The known hematinics such as iron, folic acid, cyanocobalamin, and liver extract have no value in this group of diseases.

Summary

Anemia is not a disease but a designation given to a laboratory finding present in almost all chronically ill patients and in many whose illness is of short duration. When possible, therapy is directed at the underlying disease. This implies the necessity for a precise diagnosis. Often, careful analysis of the blood by the judicious use of clinical laboratory methods is of great assistance in arriving at a diagnosis and thereby the selection of effective therapeutic agents.

J.Am.Med.Assoc. *167*:735 (June 7) 1958.

MEETING DATES 1958

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September

International Pharmaceutical Federation
September 8-13, Brussels, Belgium

October

Catholic Hospital Association, Continuing Education Program for Hospital Pharmacists

Pharmacology of Autonomic Drugs
October 13-17, St. Louis, Mo.

Sixth Annual Symposium on Antibiotics
October 15-17, Washington, D.C. Willard Hotel

December

American Association for the Advancement of Science
December 26-31, Washington, D.C.

April 1959

American Pharmaceutical Association
Annual Convention, Cincinnati, Ohio

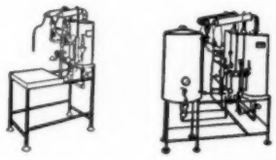
American Society of Hospital Pharmacists
Annual Convention, Cincinnati, Ohio

Barnstead Briefs

A COLUMN DEVOTED TO THE LATEST WATER PURIFICATION DEVELOPMENTS IN THE HOSPITAL

YOUR WATER STILL

Double or triple distilled water is often specified for the preparation of intravenous solutions. Such multiple distillation feeds distilled water from the condenser of one still directly to the evaporator of the next still for re-distillation. Thus the still which delivers the final distillate will have no scale in its evaporator . . . thereby insuring against foaming and priming into the condenser. To further insure the pyrogen-free quality of the final distillate, a Spanish prison type Q baffle is a standard feature on all Barnstead Stills.



KEEPING DISTILLED WATER PURE

Contamination of distilled water often occurs through improper handling and unclean receptacles after it is received from the still. Thus the purity required for many exacting hospital requirements is ruined. An easy check for such contamination is by a conductivity type test

such as is provided by a Barnstead Purity Meter. It takes only seconds, and by making such testing routine procedure in the hospital laboratory, can prevent unnecessary trouble and delays.

OPERATING AND MAINTENANCE HINTS

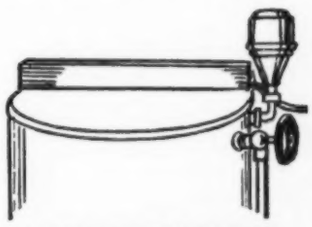
Many Hospital Technicians are concerned with the pH of distilled water. When exposed to air, distilled water will absorb the CO_2 in the atmosphere causing a decrease in its pH (increased acidity). This can be guarded against by using only freshly distilled water. If the freshly distilled water itself has a low pH, it can be increased by turning down the cooling water valve of the still. The condenser, operating at a higher heat, will drive off the CO_2 and effect an increase in pH.

FIELD REPORTS

The purification of water by demineralization (ion exchange) is generally far less expensive than by distillation, though bacteria, organics, and pyrogens are not removed by this process. Some hospitals use Barnstead Demineralizers to provide pure water for washing glassware etc., thus effecting operating savings where sterility and freedom of pyrogens is not important. Hospitals also use demineralizers to purify water before it is fed to the evaporator . . . an effective safeguard against foaming and priming.

WOULD YOU BELIEVE

80 years ago when Barnstead was first founded, distilled water was used rarely in the hospital. One use was for drinking purposes as part of a diet routine. It is of interest that Alexander Graham Bell, inventor of the telephone, ascribed his good health and 75 years of age to "a small distiller (Barnstead) from which I procure all my drinking water".



NEW PRODUCTS

Ultra-violet sterilization is employed in Barnstead's latest model distilled water storage tank. Available in all sizes, the new ultra-violet storage tank is constructed of copper and lined with pure block tin. Write for further information and for the new Hospital Catalog H to: Barnstead Still & Sterilizer Co., 31 Lanesville Terrace, Boston 31, Mass.

POSITIONS

in hospital pharmacy

The Personnel Placement Service is operated without charge for the benefit of hospitals and pharmacist members of the American Pharmaceutical Association and the AMERICAN SOCIETY OF HOSPITAL PHARMACISTS. The ultimate purpose is the improvement of pharmaceutical services in hospitals, by more adequately fulfilling hospital pharmacy personnel needs and by locating positions which provide challenging opportunities for pharmacists who have indicated an interest in a hospital career.

By participating in the service, the hospital indicates a desire to achieve a pharmaceutical service which meets the Minimum Standard for Pharmacies in Hospitals. A description of the position should be submitted to the Division of Hospital Pharmacy on the forms provided. The hospital will receive applications directly from the applicant. The hospital agrees to reply to each application received and to notify the Division of Hospital Pharmacy when the position is filled.

The pharmacist, by participating, agrees to submit a Personnel Placement Service Information Form to the Division of Hospital Pharmacy. The applicant will then be notified of openings listed with the Service as they become available and can negotiate directly with the hospital if he is interested. It is agreed that the Division of Hospital Pharmacy will be notified as soon as a position is accepted.

A listing of positions open and wanted will be made regularly in the AMERICAN JOURNAL OF HOSPITAL PHARMACY without charge. Neither the name of the hospital offering the position nor the name of the applicant will be listed, except by code. All inquiries should be directed as shown below, including the code number.

Address all inquiries to
Division of Hospital Pharmacy
2215 Constitution Avenue, N. W.
Washington 7, D.C.

positions wanted

PHARMACIST—female; experience in both hospital pharmacy and retail pharmacy. Prefers Southwest or Mid-Atlantic area. PW-11.

CHIEF PHARMACIST—prefers general hospital in Fla.; registered in Ohio and Fla.; experience in hospital and retail pharmacy. PW-12.

CHIEF PHARMACIST—(or Asst. Chief Pharmacist in large hospital); prefers vicinity of St. Louis; now employed as staff pharmacist. Registered in Mo. PW-13.

CHIEF PHARMACIST—Prefers Minn. or Calif., registration in both states; 10 years' experience government service, including commissions in U.S. Public Health Service and Navy; experience with VA as chief pharmacist; Ph. D. in Pharmacy. PW-15.

PHARMACIST—N. J. registration; prefers Pa., Fla., D.C., or Va.; experience in managing retail pharmacy. PW-18.

CHIEF PHARMACIST OR CHIEF PHARMACIST PURCHASING AGENT—prefers nonsectarian and nongovernmental institution of up to 200-bed capacity or larger. Now employed. Experienced retail and hospital pharmacy. PW-19.

CHIEF PHARMACIST IN A TEACHING HOSPITAL—registered Ind., Mich., and Mo.; prefers general hospital in Midwest; experience in teaching and in hospital pharmacy. B.S. Pharmacy; M.S. Hospital Pharmacy. PW-26.

PHARMACIST—registered in Ohio since 1934; experience in retail pharmacy only (23 years). PW-27.

PHARMACIST—prefers vicinity of Chicago; registered in Ill., now employed there. Graduate of Univ. of Ill. College of Pharm. PW-31.

CHIEF PHARMACIST OR ASSISTANT PHARMACIST—Prefers medium size hospital; registered in Ind., Mich., and Wis. 8 years' experience chief pharmacist and purchasing agent. Prefers Midwest or East. PW-32.

STAFF PHARMACIST—B.S. Mass. College of Pharmacy; age 27; registered in Mass. and N.H. 8 years retail experience. PW-35.

CHIEF PHARMACIST OR ASSISTANT CHIEF PHARMACIST—B.S. Pharm., M.S. in Hospital Pharm. Male; prefers East or Midwest. PW-36.

PHARMACIST (LARGE TEACHING HOSPITAL) OR ADMINISTRATOR—Registered in Ohio; experience in retail pharmacy, hospital administration and X-ray. PW-37.

CHIEF PHARMACIST—Male, married; B.S., working on M.S.; 4 years' experience hospital pharmacy. Registered in Pa.; will locate anywhere. PW-42.

PHARMACIST—Male, married; B.S. four years retail experience Army Dispensary. Registered New York desires to locate in East. PW-44.

PHARMACIST—Graduate of Medical College of Va.; age 26; two years Marine Corps. Managerial experience. PW-45.

HOSPITAL PHARMACY INTERN—Graduate of Univ. of Wash. has completed military service. Prefers northwest. PW-46.

STAFF PHARMACIST—Graduate Howard Univ. College of Pharmacy; limited experience; anxious to learn. Any location. PW-50.

STAFF PHARMACIST—Graduate George Washington College of Pharmacy extensive retail pharmacy experience. Prefers D.C. or Fla. PW-52.

CHIEF PHARMACIST—prefers middle West; registered in Ill.; female, single; graduate of Univ. of Ill. College of Pharmacy; now employed as Chief Pharmacist. PW-61.

CHIEF PHARMACIST—M.S. degree in hospital pharmacy; prefers East; male, single; extensive experience including pharmacy and administrative officer in Air Force. PW-62.

STAFF PHARMACIST—Completed military requirements; experienced in hospital pharmacy; prefers mid-Atlantic area, single. PW-63.

CHIEF PHARMACIST—registered in Tenn., La., Tex.; prefers South; graduate Univ. of Tenn., School of Pharmacy. PW-64.

PHARMACIST—Desires position Baltimore area; prefers small hospital; experience includes 21 years as owner-manager of retail store. PW-65.

INDIAN PHARMACIST—desires appointment to obtain higher training in hospital pharmacy; graduate Madras University; 1½ years' experience in 1,000 bed hospital, including inpatient and outpatient dispensing, parenteral and general manufacturing and administration. Available September, 1958. PW-68.

CHIEF PHARMACIST—M.S. degree in hospital pharmacy; served residency at VA Center in Los Angeles; 3 years' experience as chief pharmacist in VA since that time. Registered in Ky. and Fla.; prefers Midwest. P.W.-69.

CHIEF PHARMACIST—male, married; B.S., Ph. G. now employed chief pharmacist. Prefers South or Southeast. Registered Ala. and Va. Desires administrative work along with pharmaceutical. PW-70.

CHIEF PHARMACIST—male, married. B.S. 3 years' hospital experience; Registered N.Y. and Vt. desires to locate in New York or adjoining state. PW-71.

STAFF PHARMACIST—female married; internship at Freedman's Hospital; experienced in hospital pharmacy. B.S. prefers D.C. area. Registered in Ind., D.C. and N. Car. PW-72.

CHIEF PHARMACIST—female, single; hospital experience. Desires position 100 bed hospital. B.S. Registered Ky. Prefers Ky. PW-73.

HAITIAN STAFF PHARMACIST—male, married. Has five years' hospital experience. Present owner of pharmacy. Desires to locate in northeast U.S. PW-74.

ASSISTANT CHIEF PHARMACIST—male, married. Registered in Calif. and Wash. Background of drug company representative, retail pharmacy and now employed in Clinic and Research Foundation as Chief Pharmacist. Prefers Pacific states or Ariz. location. PW-76.

CHIEF PHARMACIST—male, single. B.S. and M.S. in Hospital Pharmacy. Serving hospital pharmacy internship. Prefers Midwest or East. PW-77.

CHIEF PHARMACIST—male, married, registered N. Y. and Pa. Extensive hospital pharmacy experience. Now employed as assistant director of pharmacy. Prefers eastern part of country. PW-78.

ASSISTANT PHARMACIST—male, married. Registered Minn. 10 years' hospital experience. Desires midwest location. PW-79.

CHIEF PHARMACIST—male, married, registered Mass., Conn. and Calif. Six years retail and five years' hospital experience. M.S. hospital pharmacy. Desires northeast location. PW-81.

PHARMACIST—Self-employed retail pharmacy for 20 years Ph.G. degree; registered N.Y. 3 years' hospital experience. Prefer locate N.Y. PW-84.

ASSISTANT CHIEF PHARMACIST—Male, married. Registered Ia. Three years USAF hospital experience. Served hospital pharmacy internship. Candidate M.S. August '58. Prefers Iowa and West. PW-85.

CHIEF PHARMACIST—16 years hospital pharmacy, presently employed Chief Pharmacist. Female, single. Registered Mich. and Ill. Prefers locate Midwest. PW-85-A.

STAFF PHARMACIST—4 years' hospital pharmacy experience; prefers Wash. state (registered). Female, married. B.S. pharmacy. PW-87.

IRANIAN PHARMACIST—desires opportunity to continue hospital pharmacy studies; single, age 30; excellent academic background; now studying industrial chemistry. Prefers location in the West or Northeast. PW-88.

ASSISTANT CHIEF PHARMACIST—female, single; B.S. 1 year hospital pharmacy internship; registered Okla. Prefers West or Southwest. PW-89.

ASST. PHARMACIST—female, married. Educated and trained in Philippines. Served hospital internship. Registered Manila. Desires to locate East Coast of U.S.—PW-91.

CHIEF PHARMACIST—prefers large hospital. Male, married; registered N.H., Mass., Calif. 10 years' VA hospital experience. PW-92.

CHIEF PHARMACIST—prefers small hospital in Ohio. Male, married; BS; registered Ohio. Excellent academic and professional background. PW-93.

PHARMACIST—male, single. Finishes internship Freedmen's hospital June, 1958. Taking Board exams. July. PW-94.

STAFF PHARMACIST OR ASSISTANT CHIEF—female, single. Filipino, educated and trained Philippines. 10 years' hospital experience. Served hospital pharmacy internship. PW-95.

STAFF PHARMACIST—male, single; registered Del. Finishes hospital pharmacy internship July 1958. Desires Mid-Atlantic area. PW-96.

STAFF PHARMACIST—23 years' retail pharmacy experience, 7 years' hospital experience. Female, registered in and prefers Va. PW-97

STAFF PHARMACIST—Completes internship July 1958. Registered D.C. Male, desires to locate in East or Midwest. PW-98.

STAFF PHARMACIST—several years of both retail and hospital pharmacy experience. Male, married. Registered Ohio and Ky. Desires to locate in either state. PW-99.

ASST. PHARMACIST—Male, married. Registered Tenn. and La. Retail pharmacy experience only. Desires to locate in South. PW-100.

STAFF PHARMACIST—Male, married. B.S; registered D.C. Desires to locate Midwest or West. 2 years as instructor in pharmacy plus retail and laboratory experience. PW-101.

PHARMACIST—Male, married. Registered Ill. Desires to locate in New England. PW-102.

CHIEF PHARMACIST—Male, married. Registered N.J. and Pa. Retail and hospital pharmacy experience. PW-103.

STAFF PHARMACIST—Single female, registered Mo. B.S. Hospital pharmacy experience. Desires locate Midwest. PW-104.

PHARMACIST—Male, married, 20 years' experience retail pharmacy. Registered Pa., desires to locate in Philadelphia. PW-105

CHIEF PHARMACIST—Male, married. 3 years hospital experience, plus retail. Registered Wis.; desires locate Seattle area. B.S. pharmacy and chemistry. PW-106

PHARMACIST—Filipino, female. B.S. Pharmacy, Univ. of Philippines. Desires locate Washington, D.C. PW-107

positions open

STAFF PHARMACIST—registered in Ill.; for manufacturing or dispensing in large teaching hospital; excellent equipment; good hours; two weeks' vacation; sick leave; minimum starting salary $470.00 per month; higher salary for those experienced in manufacturing. PO-1

ASSISTANT CHIEF PHARMACIST—eligible for licensure in N.J.; 350 bed hospital; 44 hour week, 2 weeks' vacation; salary $5200 to $5700. PO-6

PHARMACIST—80 bed hospital; full responsibility for pharmacy and central sterile supply services; minimum of one year experience in hospital pharmacy; salary open. PO-17

ASSISTANT CHIEF PHARMACIST—209 bed general hospital, expanding to 300 beds; 40-hour week; 3 weeks' vacation; $5,000.00 annually; N.J. registration required. PO-18

PHARMACIST—162 bed hospital located in Ohio; assume complete charge of the department; prefer woman with hospital internship; salary open. PO-21

ASSISTANT CHIEF PHARMACIST—185 bed hospital; prefer member of Seventh Day Adventist Church. PO-22

"ROTATING" PHARMACIST—To serve several small hospitals. Registration in both Va. and Ky. required. Excellent personnel policies. Salary $7,080 plus travel and living reimbursement while away from base hospital. *Also* CHIEF PHARMACIST AND STAFF PHARMACIST positions available at $6420 and $5880 respectively. PO-26.

STAFF PHARMACIST—female preferred; 274 bed general hospital and 172 bed maternity hospital; Calif. registration required; salary $525.00 per month; benefit program represents 17 percent of base salary. PO-27

CHIEF PHARMACIST—private hospital in S. Car.; to be in complete charge of pharmacy, including purchase and control of drugs; work with medical staff; salary $400 to start; retirement program; 41 hour week, 2 weeks' vacation. PO-28

ASSISTANT CHIEF PHARMACIST—315 bed community hospital located in N.Y. state; female preferred; 40 hours per week; three weeks' vacation. Salary open. PO-31.

ASSISTANT CHIEF PHARMACIST—181 bed general hospital; Calif. registration required; 40 hour week; two weeks' vacation; salary $450 to $500 per month. PO-32.

STAFF PHARMACIST—550 bed general hospital located in Ohio; registration required; 40 hour week; two weeks' vacation; salary $2.50 per hour or based on experience. PO-34.

ASST. CHIEF PHARMACIST—310 bed general hospital. Va. registration required. Female with hospital pharmacy experience preferred. 40 hour week, 2 weeks' vacation, other ample benefits. Salary $5,000-$6,000. PO-35.

STAFF PHARMACIST—750 bed general hospital located in N.Y. state; B.S. degree required; hospital pharmacy experience desirable but not necessary; 40 hour week; two weeks' vacation; $450 per month. PO-36.

STAFF PHARMACIST—manufacturing, dispensing, inventory control and some supervision; registration in Tenn. required; salary $385.00 to $450.00 per month; 44 hour week; paid sick leave. PO-37.

STAFF PHARMACIST—prefer one or more years' experience, with at least one year internship; 42-hour week; 4 week-vacation; salary $450 month plus one meal; 660 bed teaching hospital. PO-38.

STAFF PHARMACIST—460 bed general hospital located in Mass. Prescription filling, some manufacturing. Two weeks' vacation; 40 hours per week, hospital employment benefits. PO-40.

CHIEF PHARMACIST—120 bed general, non-profit hospital. Individual will have complete charge of ordering, dispensing and charging of medical supplies; also assist in general hospital

purchasing. Either male or female; registration in Ohio required; experience in retail pharmacy given preference. Salary open; 40-48 hours per week; 2 weeks' vacation; other general hospital benefits. PO-44.

ASST. CHIEF PHARMACIST—325 bed general hospital. Must be capable of assuming complete responsibility in absence of Chief Pharmacist. 40 hour week; 4 weeks' vacation. Salary $4500. PO-47

STAFF PHARMACIST—487 bed general hospital. Inpatient and outpatient prescriptions; manufacture of some injectibles. Male or female, will take recent hospital internship graduate with high academic achievement. 40-hour week, 2 weeks' vacation and other hospital benefits. PO-48.

STAFF PHARMACIST—300 bed general hospital. Inpatient orders—no bulk compounding. Must be eligible for Ill. registration. 44-hour week, 2 weeks' vacation. PO-50.

ASSISTANT CHIEF PHARMACIST—550 bed general hospital. Assume supervision of five pharmacists and two porters. Must have N.Y. registration. At least 5 years' experience in hospital pharmacy. 35-hour week, 2 weeks' vacation, other benefits. Salary $4500 to $5000. PO-51.

STAFF PHARMACIST—450 bed general hospital. B.S. in pharmacy, 1 year hospital pharmacy internship or one year's experience professional pharmacy, Col. licensure. 40 hour week, vacation —other benefits. Salary $383. PO-52.

CHIEF PHARMACIST—325 bed private hospital. Position includes compounding, dispensing, manufacturing all types of pharmaceuticals. Must be eligible for registration in N. Car. Male or female, hospital experience desirable, but not necessary. About 45 hour week, 3 weeks' vacation, other benefits. Salary $450-$500. PO-54.

PHARMACIST SUPERVISOR—2700 bed state mental hospital. Male; Va. registration required; minimum 1 year experience; ability to work effectively with professional staff. Merit increases; retirement benefits; vacation and sick leave with pay. Salary $5880. PO-56.

ASSISTANT CHIEF PHARMACIST AND STAFF PHARMACIST—335 bed general hospital located in Fla. Salary open. PO-57.

CHIEF PHARMACIST—200 bed general hospital. Male or female considered. Prefer hospital experience. Salary $5500, 44-hour week; vacation; sick leave. PO-58.

CHIEF PHARMACIST—88 bed general hospital—future expansion planned. Experience in purchasing and central supply desired. 40-hour week. PO-59.

STAFF PHARMACIST—290 bed general hospital. Eligible Ohio registration. Take charge of department in absence of Chief Pharmacist. 40-hour week, 3 weeks' vacation; other benefits; salary $4700 - $5700. PO-60.

STAFF PHARMACIST—325 bed research hospital. Manufacturing sterile solutions and assisting in product development. Two years' minimum experience, preferably in hospital pharmacy. Eligible for N.Y. licensure. Salary $4770-$5860 plus benefits. Research work beyond 40-hour week available at $3.00 per hour. PO-61.

STAFF PHARMACIST—345 bed general hospital. Must have Ill. registration. Ability to take charge of dept. 40-hour week, 3 weeks' vacation, other benefits. Salary $450. PO-62

ASST. CHIEF PHARMACIST—100 bed general hospital. Must be eligible Ind. registration. Young lady preferred. Hospital experience not necessary. Main area of responsibility will be in Central Supply and Solution Manufacturing. 40 hour week, 3 weeks' vacation. Salary open. PO-63.

PHARMACIST—Animal Hospital. Duties including maintaining drug stock and checkout service; also willing to help students. 44 hour week, 4 weeks' vacation. Salary $5,000. PO-64.

CHIEF PHARMACIST—131 bed general type hospital. Duties include full charge of pharmacy, purchase of drugs. 40 hour week, 4 weeks' vacation, other benefits. Salary $5200. PO-65.

CHIEF PHARMACIST—75 bed general hospital. Full responsibility for pharmacy and other hospital administrative duties. 40 hour week, 2 weeks' vacation. PO-66.

STAFF PHARMACIST—263 bed general hospital. Eligible registration in Wis. B.S. degree required. 40 hour week, 2 weeks' vacation, other benefits. Salary commensurate with experience. PO-67.

ASST. CHIEF PHARMACIST—In charge of Central Supply Service at large eastern university hospital. Prefer MS degree in hospital pharmacy. Salary $5548-$6000 depending upon experience in Central Supply work. PO-68.

ADVERTISERS

August, 1958

OFFICIAL REPORTS · AMERICAN SOCIETY OF HOSPITAL PHARMACISTS

1958 LOS ANGELES MEETING

APRIL 20-22

CONTENTS

address of the President

LEO F. GODLEY

Hospital Pharmacists
Distinguished Guests
Ladies and Gentlemen

It is a pleasure to address you as President of the AMERICAN SOCIETY OF HOSPITAL PHARMACISTS. It has been a good year for me. As I have met with affiliated chapters and other groups over the country, I have in every case, felt richer for the experience. It has been an interesting year indeed. It has been a year replete with accomplishments, and inspiration, and hope. It has been an eventful year for the SOCIETY.

While I have not traveled as much as I would have liked to, I have been in most of the geographic sections of the country. I have met with hospital pharmacists in Seattle, Detroit, Montreal, Chicago, Los Angeles, Washington, Fargo, Oklahoma City, Atlanta, Iowa City, Charlotte, New Orleans, Cleveland, Ann Arbor, Madison, New York, Atlantic City, Albany Hartford, and Buffalo. I am sorry that some very kind invitations had to be refused because of conflict. I am also sorry that I was ill the week-end that I had promised to meet with the Oregon Chapter in Portland.

The Journal

The SOCIETY is our organizational and professional body. Our voice is the JOURNAL. It is perfectly obvious to me that the 2,762 SOCIETY members expect and find in the JOURNAL the integrity, sincerity, and dependability they demand and require. It is an item of considerable pride to me that our publication became a monthly periodical during my term of office; unfortunately, however, I can claim no credit for this accomplishment. This idea has been under discussion for several years and the appearance of the first issue of the AMERICAN JOURNAL OF HOSPITAL PHARMACY in January of this year was a great advance! Editor Francke has realized another triumph! *The Bulletin* not only has a new name but a new format as well.

I am happy to report that the Executive Committee approved a contractural arrangement with the Editor that is appropriate for both parties. We look forward to the continued success of the JOURNAL and its world wide representation of American Hospital Pharmacy.

American Hospital Formulary Service

The *American Formulary Service* is imminent. This afternoon, Dr. William Heller, Director of the Service will give us the complete story. Dr. Heller has worked for two years on the Formulary and we are proud of the job he has done. It has been a long and difficult task. It has been encouraging to note the interest that this activity has "stirred up" all over the country. I am sure that this program will mean a great deal to the SOCIETY and to hospital pharmacy; and justifiably so, for it is a practical tool that will find application in our immediate professional environment.

I think that if we use our imagination just a little, we can visualize an area of organizational advantage that the Formulary Service can avail us. It is an extension of our publications, our press. It involves minds and intellects. It makes specialists of a few, it educates more, it informs many. Fired with the enthusiasm that produced the JOURNAL, the Division, and the Minimum Standard, this Service, this idea, as I see it now, might well become the nucleus of a very significant hospital pharmacy publication service with a supporting laboratory to work out and evaluate procedures and technological ideas. Romancing, yes—but possible—and very, very necessary.

Relationship With Other Organizations

The relationship of the SOCIETY with other organizations is becoming more important each year. This is certainly an indication that we have something to offer to the family of health professions. I shall mention these relationships briefly as I understand them.

First, the *American Pharmaceutical Association.* Through the years, the ASHP has maintained a close parental tie with the Association. The bond, of course, has been the Division of Hospital Pharmacy. We are most pleased with, and proud of the Division and its significance and activity. Director Paul Parker has been in the Division two years now and we are fortunate that the A.Ph.A. has provided at headquarters, a career hospital pharmacist to represent our interest. As President of the SOCIETY, I feel somewhat disappointed that the Policy Committee did not meet this year. We did, however, have Dr. Fischelis with us for the entire January meeting of the Executive Committee at Brook Lodge in Kalamazoo.

We are anxiously awaiting the activation of the Internship Accreditation Program that some time ago Mr. Parker announced was forthcoming. I shall ask the Executive Committee to offer its assistance and support to the Division with the hope that the Accreditation Program might be expedited.

Our relationship with the *American Hospital Association* is one of which we are very proud. The Joint Committee which we maintain with this Association met twice this year. Mr. Joseph Oddis, a career hospital pharmacist, is employed as a staff representative by the A.H.A. and this had done a great deal in giving our contact more significance. The two annual hospital pharmacy institutes continue to be major activities in our educational schedule.

The American Institute of the History of Pharmacy invites one of our members to serve on its Council. This organization continues to serve the entire profession and they have been most sympathetic and helpful in programs relating to hospital pharmacy. Just recently, a letter from me was sent to the entire membership urging our support for the AIHP. I sincerely hope that you will continue your support of this organization through the years.

The American Association for the Advancement of Science offers another outlet for hospital pharmacist organizational participation. Last December at the AAAS annual meeting in Indianapolis, a full day's program on hospital pharmacy was arranged by the ASHP representative to that organization.

In *International Pharmaceutical Activities,* of interest is the fact that we participated in the Fourth Pan-American Congress on Pharmacy and Biochemistry in Washington last November. Also, the Secretary of the SOCIETY, the Editor of the JOURNAL, and I represented the ASHP at the Annual Meeting of the Canadian Society of Hospital Pharmacists in Montreal last August. Next September, the SOCIETY will have representation at the International Pharmaceutical Federation meeting in Brussels. Significant, also, is the student exchange program as outlined by Chairman Francke of the Committee on International Hospital Pharmacy Activities. This is an area wherein a high quality of professional interest can be centered. I would, therefore, urge our conscientious participation in this program.

Our relationship with *The National League of Nursing* was recommended by the A.H.A. with the hope that we might cooperate with the nursing group in a joint effort to evolve safety measures for handling of drugs in hospitals. This idea came about as a result of the SOCIETY's Special Committee on Safety Practices and Procedures. The NLN has indicated their desire to cooperate in this work.

As a basis for this new relationship, we have the excellent and well thought out ground work of Chairman Robert Lantos' Committee. I would hope that liaison with this important organization would be a continuing activity which might conceivably concern itself with other problem situations common to both organizations.

Committee liaison with the *National Pharmaceutical Council* has been one of the most rewarding experiences of the year. As you remember, the Council invited us to meet with them when the SOCIETY objected to certain adverse publicity to the Formulary System and hospital pharmacy.

We met twice during the year; and a letter over my signature informing you of this activity was sent to the membership last October. As indicated in the letter, we felt that industry's great objection to the Formulary System stemmed from certain mal-practice incidents and a great amount of misunderstanding and misinformation. It was clearly indicated to us by these officials that in terms of our explanation, the Formulary System was not entirely incompatible with the best interests of the pharmaceutical industry.

Of considerable importance, arising from this joint activity, is the fact that we have a functioning committee that will afford an available mechanism that can reduce differences to a low order and build constructive coexistence.

The *American Association of Colleges of Pharmacy* is an organization with which we have no formal connection. In doing research for this address, I noted several recommendations through the years that some sort of organized joint discussion would be desirable. I have had several teaching people refer to the desirability of AACP-ASHP conferences; and some have deplored our lack of wisdom in overlooking the advantage of joint relationship.

In thinking the idea through, I have come to the realization that since one of our major areas of interest is education, we should have regular and serious discussions with representatives from the Colleges. There have been suggestions that this interest might be effected by inviting College representation on the

Policy Committee of the Division or the Executive Committee of the Society; but I firmly believe that either of these plans would defeat the program and dilute the activities of these two very busy committees. I am, therefore, recommending that the forthcoming Executive Committee explore the need for a Joint Committee with the AACP and that they invite comment and recommendations for the record from that organization.

Special Committees

Special Committee activities of the Society have long been a source of strength in the organization. Of particular note is the continued service of some of these dedicated people who are currently carrying on special committee responsibilities. I would like to confer upon them the most special presidential praises! I speak particularly of Clara Marie Henry for her work on Economic and Household Poisons, of Ludwig Pesa on Disaster Preparedness, of Benjamin Teplitsky on Special Projects, of Don Francke on International Hospital Pharmacy Activities, of Alex Berman on Historical Records; and new this year, but no less dedicated are Ethel Pierce on Professional Liability Insurance and Robert Lantos, to whom we have already given acclaim, on Safety Practices and Procedures.

The Executive Committee continues to find difficulty in framing in words, appreciations adequate to convey the thanks of the Society to these members.

Research and Development

The Committee on Research and Development has now been operating for two years. Milton Skolaut has capably chaired this Committee since its inception. The Board of Selectors for the past year were Drs. Jenkins, Purdum, and Skauen. I watched these men work for a day at their meeting in New York last October and I was greatly impressed by their devotion to their responsibility and their high regard for this activity in hospital pharmacy.

As you know, the very generous Lederle Laboratories grant of 1956 was duplicated again in 1957, and these funds, through the Research and Development Committee, have been administered and apportioned to hospital pharmacists all over the country for research. I am convinced that this is one of the most important activities of the Society and we are grateful to Lederle for their confidence and support of hospital pharmacy.

Others of our friends in industry have indicated their wish to contribute funds for Society activities. I would say that we should find an effective means whereby we can channel the gifts of these friends of the Society through the Research and Development Committee. I recommend that the forthcoming Executive Committee study this administrative situation with Research and Development; and that the idea be considered of utilizing an additional subcommittee that would serve as an appropriate contact mechanism between the Society and the donor. With the enthusiasm and ability that we have in this important field of interest, blended with our hope and discretion, I am sure that the Society will accrue indescribable advantage, and that our prudent utilization of these funds will build lasting memorials of good will to the donors.

Dues

As the Society grows, and matures, and complicates, and becomes more available and helpful to the individual practitioner as well as to the entire profession, so much more are the requirements in the way of energy, and time, and physical facilities. Have you thought what a service body the Society really is: a monthly Journal that's even bigger and better than *The Bulletin*, A Formulary Service, Research and Development, Joint Committees with the A.Ph.A., A.H.A., NPC, NLN, and I hope with the AACP.

Of course this is the preamble to my resolution that there must be more money in the budget to conduct these and other activities to our professional advantage. Since this is a democratic organization, these funds come from the members in the form of dues. I recommend, therefore, that we approve at this convention today and tomorrow, according to the constitutional provision for amendment of the By-Laws, an increase of $5.00 in the annual membership dues, with the understanding that the increased rate will become effective January, 1959. It is my feeling that we will recognize this as our professional responsibility.

Executive Secretaryship

It is obvious to most of us, I am sure that the forward progression of the objectives of the Society depends upon the coordination of its various activities. This has been done since 1949 by the Secretary of the Society, Gloria Niemeyer Francke. A conservative estimate is that these duties require half of her working time. A person less experienced in organizational procedures and protocol, like the president of the Society, for example, would require considerably more time to accomplish a similar result.

It is quite usual, when an organization "grows up" as ours has, that it accrues administrative and executive details that are so voluminous that they can no longer be handled by voluntary assistance. Then, of course, the organization employs an executive secretary. This individual is charged with the responsibility of getting the work done, interpreting the policies of the organization, and the thinking of the governing body to the membership and related organizations. This is the position that the Society has been in for some time. It is, therefore, my hope that we will, by constitutional amendment, elevate the title of the office of Secretary of the American Society of Hospital Pharmacists to the more appropriate title of Executive Secretary. I, therefore, recommend that action begin this morning, at this convention, to satisfy this constitutional inadequacy. Further, I have recommended that the Executive Committee be instructed to work out an appropriate compensation for the office which would be compatible with the Society's budget.

If this were an original idea, I would be very pleased indeed; but in doing research for this presentation, I noted that a similar recommendation was made in the President's Address in 1952. I believe that practically every president since that time has recommended or hoped that the secretaryship could be put on a substantial non-voluntary basis, even to the extent of full time. I feel confident that the Society has reached the stage of maturity and prestige that the advantages to be gained by this modification of our organizational framework are fully realized; and that you believe with me that we should make this change now.

You see, the future of the American Society of Hospital Pharmacists is in your hands.

Constitution and By-Laws

Early in my presidential year, I requested the Committee on Constitution and By-Laws to study and review this document to determine if changes should be made to assure the effective and democratic operation of the Society.

The Committee, consisting of Don Francke, *Chairman*, Paul Parker, and George Archambault, had a two day meeting during the year and evolved some very remarkable thinking which I will try to summarize for you. The first of their recommendations was that the Executive Committee, now, predominantly an appointed body, be replaced by a Council or Board made up only of elected members. Under this recommendation, the governing body would consist of the same offices now represented on the Executive Committee (president, vice president, treasurer, secretary, president elect, and past president) and, in addition, there would be six other elected members. That would make the twelve-membered council, all elected. The Committee recommended that to maintain experienced counselors, the members would serve for three years and that the terms of office be so rotated that only two new members be elected each year.

The function and duties of the ASHP Council would be similar to those of the present Executive Committee, that is, to serve as the governing body of the Society and to carry out the intent of resolutions and other decisions made at the Annual Meeting.

The second proposal of the Committee is concerned with the House of Delegates. It was thought that the House should be strengthened and given more responsibility. It was felt that this could be accomplished if the House of Delegates were to receive, review, and discuss all committee reports and resolutions. It was recommended, however, that all actions of the House be subject to review and approved at a General Session during the Annual Meeting. This, I believe, is important for it would assure general membership authority, which is as it should be.

The third recommendation of the Committee concerns establishment of a membership class to be known as "Fellow of the American Society of Hospital Pharmacists." The Committee explained, and I quite heartily concur, that in the event of Society adoption of a "Fellow" classification, that rather rigid requirements be established for qualifying. Requirements would quite naturally be far beyond those for licensure; and any Society member would, of course, be eligible to take the examinations that would be set up for Fellowship qualification. The Committee thought that some of the additional requirements for Fellow might be: writing

articles for publication, being active in organizational work, engaging in research, and operating in a department that complies in all ways with the Minimum Standard.

I am sure that you will agree with me that these recommendations are of vital concern to the future development and strengthening of the Society and of hospital pharmacy. It is my sincere hope that this work will be continued and that a new draft of the Constitution and By-Laws incorporating these and other suggestions made by the Committee will be prepared. I recommend that such action be taken and that the draft of the proposed Constitution and By-Laws be sent to all Affiliated Chapters of the Society for review. I further recommend that Affiliated Chapters of the ASHP make these suggested changes a topic of discussion at one of their meetings during the coming year and that a new Constitution and By-Laws be adopted in 1959.

Spease and Whitney

It is appropriate that we have paid homage to Edward Spease and Harvey A. K. Whitney today. What their accomplishments and influence have meant to the ideology and philosophy of hospital pharmacy as well as its practice as a specialty, is beyond measure. Those of us who knew these men agree with the historians that indomitable spirits and dynamic personalities such as these will never die.

Acknowledgements

I offer grateful acknowledgement and thanks to all who have given me sympathy and counsel . . . to the officers who served with me during the year: Sister Mary Berenice, Charlie Barnett, and Gloria Francke . . . to each member of the Executive Committee for being available, and capable, and dependable . . . to Charlie Towne and Jack Heard for so much that is so obvious . . . to the committees for their untiring and effective labors . . . another very special appreciation to Secretary Gloria Francke for assistance rendered far beyond the call of duty . . . to the Administrator of my Hospital, Dr. W. C. Perdew, for believing that my Society activity was important . . . to my wife for her tolerance and encouragement . . . and, of course, to all of you, without whom there would be no ASHP at all.

address of the President-Elect

ROBERT BOGASH

Mr. President, Members of the House of Delegates, Ladies and Gentlemen:

For some years now I have harbored the opinion that the address of the President-Elect is a most difficult undertaking. I stand here, no longer suspicious but instead convinced.

To me this is not an address since it is neither a report nor a discourse. It is a prospectus, a promise of things to come, a sincere pledge but, nevertheless, intangible. Conversely, the President's farewell message reports the tangible accomplishments of the year past. That, in my opinion, is an address. I feel that while you have come here to, among other things, hear me, I instead should be listening to you. In this understanding I would share with you some of my thoughts and plans.

There is credited to Benjamin Disraeli the maxim, "Success is best achieved through constancy of purpose." I place much credence in this adage. I believe that you, the individual members, through your collective drive to better pharmacy practice in hospitals, to upgrade patient care, to improve your professional and economic status, to make available new services to the paramedical professions—you are the constancy, purpose and success of the Society. The future stability, growth, and direction of this organization are vested solely in the membership.

By comparison—Society officers are more like ships in the night—here temporarily, then gone. Our tenure is short. We do, however, have a purpose. We can, within the periphery of Society policy, speak for you. We can help to correlate and effectuate your needs and wants. We can report to you occurrences of direct and contingent interest to pharmacy and the other health professions, respectively. We can help project the long-range plans so necessary and vital to hospital pharmacy and its practitioners. Through our travels we can maintain liaison with other paramedical professions, keeping them informed both as to our objectives and available services. But no matter what the presidential purpose—or direction—it originates with you, and progresses in proportion to your personal interest and activity in the Society. The president, officers, and organization are as effective as the membership is active.

We are a young and vibrant group though small by comparison with other professional organizations. Yet we are already consulted for opinion and advice, and looked to as the last stronghold of professional pharmacy practice. This status has been attained by the far-sighted performance of many people—some of whom are here today. Those of us who practice today reflect in and enjoy the good will and reputation that others have helped fashion for us. We owe much to people like Harvey A. K. Whitney and Dean Edward Spease, who helped conceive, nurture and direct the Society toward altruistic and beneficial goals. There is no contest that the American Society of Hospital Pharmacists is at the highest level of its organizational history; witness the new monthly American Journal of Hospital Pharmacy and the *American Hospital Formulary Service*. All of us desire to further consolidate and advance the Society's stature—for in it we are all mirrored. We must remember, however, that such growth and recognition brings with it additional obligations and responsibilities to all phases of pharmacy—let alone pharmacy practice in hospitals.

It is said that "what is past is prologue" and, in this instance, it is a truism. Hospital pharmacy can continue to fashion services of real benefit to the patients who occupy our beds and visit our clinics. We can further continue to service the other health professions. There are, however, certain prerequisites: We should have knowledge of our history and tradition, we must be alert to current trends, we must anticipate and plan for the future needs of our particular practice of pharmacy. Such lore and insight comes best from exposure to the ASHP—from the local chapter up. The Society still needs the same animated enthusiasm displayed by those who brought us to our present level.

There are external factors which will affect us. I suspect that the dramatic changes now occurring in the socio-economic structure of pharmacy will find the hospital pharmacist in an accentuated position of importance—to both the public and the profession. I anticipate that he will come into far greater contact with the public generally. In this capacity, the hospital pharmacist will be an invaluable pivot point for pharmacy's public relations. Similarly, I maintain that his inherent value will be increased: to the hospital, the public, and the Society. Future developments will make available to the hospital pharmacist many rewarding opportunities. If they are recognized, he will have the option to accept or reject these opportunities. Recognition and acceptance impose the necessity of awareness, initiative, a desire to expand one's personal and professional knowledge, scholastic or not, and, most important of all, good solid experience. Such insight and proficiency—call it know-how, if you will—are not natural endowments, nor do they come from the green sheets and the American Journal of Hospital Pharmacy alone. They come, instead, from exposure to hospital pharmacy practice which can be supplemented and enhanced by participation in Society functions. Much can be gained from attending and working in the local chapters, participating in national committees, and attending the Annual Meeting, Institutes and Seminars. (This is two-way communications.)

If past is prologue, only your continued, collective endeavor will assure for hospital pharmacy an even brighter future—bringing to its practitioners further psychic and economic rewards.

Committee Appointments

To insure such progress, Mr. Allen V. R. Beck, from Indianapolis, has been appointed Program and Public Relations Committee Chairman. This appointment immediately includes Mrs. Johnnie Beck, ex-Chief Pharmacist of Georgia Baptist Hospital in Atlanta, a "Georgia Peach" still once replaced.

I have made two requests of Allen. One, that he consider including on our program and institutes as much material as possible to interest and benefit the pharmacists in small hospitals; and second, the he explore, with Mr. Joseph Oddis and others, the possibility of designing one institute for pharmacy practice in small to medium-sized hospitals, and one for medium to large-sized hospitals.

Mr. Louis Jeffrey will chair the Committee on Membership and Organization. A new member of the Executive Committee, he brings with him a solid experience

and reputation in this phase of organizational work. The Albany area of New York State attests to Mr. Jeffrey's productive efforts in this regard.

Mr. Jeffrey has been requested to work closely with Mr. Parker and Dr. Archambault in further developing and effectuating the plans submitted by this year's committee. They will contact you soon to help them compile a national list of prospects, that is, practicing hospital pharmacists with no present affiliation. Their plans are exciting, and I solicit for them your help.

Mr. Robert Lantos will chair the Committee on Minimum Standards. Mr. Lantos, also new to the Executive Committee, comes fresh from a most productive year, chairing the Safety Practices and Procedures Committee, of which you will hear more during this meeting. Mr. Lantos has, for a springboard, the excellent five-year long-range plan submitted by Mr. Latiolais' committee. We look forward to this plan as insurance for the continued improvement of hospital pharmacy practice and patient care.

Captain Jack MacNamara, of Brooke Army Medical Center Hospital, Texas, will chair the Committee on Pharmacists in Government Service. Captain MacNamara has a long and creditable record, and comes highly recommended for this office. Pharmacy practice in military hospitals can be assured of continued diligent attention.

The Special Committees have been very productive, and continue to make advances in areas of particular interest:

The Committee on Special Projects will be again chaired by Mr. Benjamin Teplitsky of Albany, New York. Mr. Teplitsky's committee has made excellent progress, some of which was reprinted in the first issue of the AMERICAN JOURNAL OF HOSPITAL PHARMACY. Such fruitful efforts would only be impaired by any directions from me. I have, therefore, given Ben only one word of advice—GO.

Ludwig Pesa of Passaic, New Jersey, our near-permanent Chairman of the Committee on Disaster Preparedness, will continue in that capacity. His efforts and store of information on this subject are invaluable to us. His special report to the Executive Committee will be of interest to you.

Mr. Robert David Anderson of Staunton, Virginia, will chair the Committee on Safety Practices and Procedures. Initiated by President Godley, this committee achieved a tremendous amount of work in one year. The developments and contacts are such to continue this committee's efforts. We were assured of this continuity with Mr. Anderson's appointment.

The Committee on Isotopes will be chaired by Mr. Jack Heard of Los Angeles, California. I have asked Mr. Heard to confer with Mr. Peter Solyom, and to report to us the present status of this committee and what should be its direction, if any, at this time.

Mr. J. Robert Cathcart of Wilmington, Delaware, will chair the Committee on Economic Poisons. Mr. Cathcart's work, aided by Mr. Robert Simons of the same city, has been extensive in nature, and so functional that they have received much national publicity for these efforts. Such experience will serve the SOCIETY well.

Dr. Don E. Francke, of Ann Arbor, Michigan, will continue as Chairman of the Committee on International Hospital Pharmacy Activities.

Adela Schneider of Houston, Texas, will chair the Committee on Historical Records. Miss Schneider's contributions to the SOCIETY are similar to her native state—legendary.

Dr. George Archambault of Washington, D. C. will chair the Committee on Laws, Regulations, and Legislation. He needs no introduction. There was some doubt in my mind whether or not this special committee had fulfilled the purpose for which it was originally intended. Recent developments, particularly the interest of various State Boards of Pharmacy in hospital pharmacy practice, gave me cause to appoint so talented and experienced a chairman. Equally impressive is his entire committee. We can rest assured of sound direction and opinion should the need arise.

The Committee on Professional Liability Insurance will be chaired by Mr. Edward Hartshorn of Illinois. Mr. Hartshorn has been asked to further develop the initial report of last year's committee, and to explore any other possibilities—and summarize the available insurance plans. This is an ever-increasing area of importance to the hospital pharmacist.

I have specifically made no mention of the *American Hospital Formulary Service*. You will hear how this long, arduous effort has come to fruition. This accomplishment is truly a dynamic example of the SOCIETY's creative and productive capacities. It is a tribute to the committee and to the membership for its foresight in favoring this Service.

It remains for us to aid and insure this project. Each of us can do a public relations job for the SOCIETY. Use the Service—talk about it to others. No finer formulary, let alone continual service, exists today. It is my conviction that this Service will be a "hallmark" for the SOCIETY

The progress of the Research and Development Committee is to a point where the operative pattern should be re-evaluated to meet the requests and offers of additional donors. It is suggested that this committee pursue and investigate those channels necessary to permit the SOCIETY to accept, handle, and distribute such funds. A report of this nature would be highly welcomed by the Executive Committee and a service to the growth of the SOCIETY in this *vital* field.

Lastly, there are two Special Committees which I would like to see established, and will do if time and schedule permit during the coming year. They are a Committee to Study Parenteral Solutions, and a Committee to Study Packaging—Its Methods, Techniques, and Containers. Both subjects are now important and I believe will be even more important areas in pharmacy-central sterile supply operations.

A note to the Resolutions Committee: All suggestions made in this discussion are exactly that. No resolutions have been made or implied.

That you have placed your confidence in me gives me a quiet sense of pride and an even stronger sense of obligation. I am indebted to the membership of the AMERICAN SOCIETY OF HOSPITAL PHARMACISTS for this privilege. With your aid, criticism and guidance, I shall work unstintingly to redeem this obligation.

Thank you.

report of the Fifteenth Annual Meeting

April 21-22, 1958

GLORIA FRANCKE, *Secretary*

The Fifteenth Annual Meeting of the AMERICAN SOCIETY OF HOSPITAL PHARMACISTS was held at the Biltmore Hotel in Los Angeles, California on April 21 and 22, 1958, in conjunction with the Convention of the American Pharmaceutical Association. Approximately 200 SOCIETY members were in attendance at the General Sessions.

The ASHP House of Delegates had met on the previous day with a total of fifty-five accredited delegates representing thirty-seven affiliated chapters, the Executive Committee, and the Chairmen of Special Committees. (See page 700 for Report of House of Delegates.)

Note should be made of the special events during the Annual Meeting and the work of the Local Committee. Since these do not constitute part of the *official* ASHP sessions, a report is not included here. However, to the extent possible, and for the record, details were included in the Convention Story appearing in the June issue of the JOURNAL.

Also, the "Pre-Convention Seminar on Hospital Pharmacy Education and Training" constituted an important session for many ASHP members. This was held on Saturday night prior to the opening of the Annual Meeting on Sunday. The Seminar was coordinated by Herbert L. Flack and Charles G. Towne. As a matter of record the program is included here.

"Welcome and Introductory Remarks," by Charles G. Towne, Chief, Pharmacy Service, Veterans Administration Center, Los Angeles, Calif.

"An Effective Student Visitation Program," by Jeannette Sickafoose, Chief Pharmacist, Aultman Hospital, Canton, Ohio.

"The Hospital Pharmacy Curriculum." *Moderator:* Don E. Francke, Chief Pharmacist, University Hospital, Ann Arbor, Mich. *Panel:* Chester G. Bazel, Chief, Pharmacy Teaching Section, Veterans Administration Center, Los Angeles, Calif.; Troy C. Daniels, Dean, School of Pharmacy, University of California, San Francisco, Calif.; Alvah G. Hall, Dean, School of Pharmacy, University of Southern California, Los Angeles, Calif.; E. E. Leuallen, Dean, School of Pharmacy, Columbia University, New York City, N. Y.; Warren Weaver, Dean, School of Pharmacy, Medical College of Virginia, Richmond, Va.; Louis C. Zopf, Dean, College of Pharmacy, State University of Iowa, Iowa City, Ia.

"Viewpoint of Hospital Administration Concerning Programs for Training Career Hospital Pharmacists," by Louis A. Ellmore, M. D., Medical Director, Orange County Hospital, Orange, Calif.

"Internship and Residency Programs." *Moderator:* Paul F. Parker, Director, Division of Hospital Pharmacy, American Pharmaceutical Association, Washington, D. C. *Panel:* Herbert L. Flack, Director, Pharmacy Service, Jefferson Medical College Hospital, Philadelphia, Pa.; Don E. Francke, Chief Pharmacist, University Hospital, Ann Arbor, Mich.; Arthur Purdum, Chief, Pharmacy Service, Johns Hopkins Hospital, Baltimore, Md.; Vernon O. Trygstad, Director, Pharmacy Service, Veterans Administration Center, Washington, D. C.

"Current Research in Graduate Programs," by Donald M. Friedmann, Pharmacy Resident, Veterans Administration Center, Los Angeles, Calif.

First Session

The First Session of the Fifteenth Annual Meeting was called to order by President Leo Godley on Monday, April 21, at 9 o'clock A.M. The meeting was opened with an invocation by Dr. F. Clark Aydelott, Chaplain, Los Angeles County General Hospital.

A special tribute—"Harvey A. K. Whitney and Edward Spease—in Memoriam"—was presented by Dr. Glenn Sonnedecker, Director, American Institute of the History of Pharmacy. Complete text of the Memoriam honoring the two recently deceased members of the AMERICAN SOCIETY OF HOSPITAL PHARMACISTS appears on page 507 of the June issue of this JOURNAL. This tribute marked a solemn occasion in the Los Angeles Meetings. Following the presentation, the assembly stood in paying tribute to Whitney and Spease while Dr. Sonnedecker read the following:

May the achievements of Harvey A. K. Whitney and Edward Spease, whom we here honor, ever remind us that what we owe to the past obligates our best efforts to the future; and may their professional foresight and convictions foster in us an impulse toward the best that is in pharmacy and in man.

Opening the Business Session, President Godley asked for a motion to accept the Report of the Fourteenth Annual Meeting as printed in THE BULLETIN (July-August 1957). Such a motion was made by Grover Bowles, seconded by Allen Beck, and carried.

Mr. Jack Heard, Chairman of the Local Hospital Pharmacists' Committee, welcomed those attending the Annual Meeting, made announcements regarding plans for special events during the week, and recognized members of his Committee assisting in arrangements. Further announcements were made by Secretary Francke.

The President then called for resolutions, asking that these be given to the Secretary immediately.

Announcement of the following committees was made, although official appointments had been made in the meeting of the House of Delegates on Sunday:

Committee on Resolutions: Grover C. Bowles, *Chairman;* Clifton Latiolais; Clara Henry; and Robert Bogash. *Assistants to Committee:* Claude Busick, William Heller, and Robert Lantos.

Committee on Nominations: Sister Mary Florentine, *Chairman;* Don E. Francke; and Paul F. Parker.

At this time President Godley called on the following Fraternal Delegates who brought greetings from their respective Government Services: Lieutenant Colonel William L. Austin, Department of the Army; Colonel Leonard P. Zagelow, Department of the Air Force; Mr. Vernon O. Trygstad, Veterans Administration; Lieutenant Commander S. C. Pflag, Department of the Navy; and Mr. Allen Brands, Public Health Service.

Also introduced and presenting greetings from their respective organizations were Mr. Thomas A. Foster, Office of Defense Mobilization, Washington, D. C., and Mr. Rex Olsen, Assistant Editor of *Hospitals,* Journal of the American Hospital Association. Mr. Olsen was also representing Mr. Joseph Oddis, Staff Representative of the A.H.A.'s Council on Professional Practice. Mr. M. R. Kneifl, Executive Secretary of the Catholic Hospital Association and Dr. Joseph Burt, President of the American Pharmaceutical Association were also called on to bring greetings at this time. Since neither was present, Mr. Godley indicated that they would be called on later during the meetings.

President Godley then proceeded to presentation of the Annual Reports by chairmen of committees and officers. He indicated that complete sets of the Reports had been distributed to the members of the House of Delegates and copies are being distributed to members. Because of the length of the reports, chairmen of committees and officers were asked to present summaries. Further the complete text of reports is published in this issue of the JOURNAL. (See pages 696 to 717.) Committee reports were then presented in the following order: Disaster Preparedness, Ludwig Pesa, *Chairman;* Economic and Household Poisons, Clara Henry, *Chairman;** Historical Records, Alex Berman, *Chairman;* International Hospital Pharmacy Activities, Don E. Francke, *Chairman;* Safety Practices and Procedures, Robert L. Lantos, *Chairman;* Isotopes, Peter Solyom, *Chairman;* Professional Liability Insurance, Ethel Pierce, *Chairman;* and Special Projects, Benjamin Teplitsky, *Chairman.* This completed the reports of the Special Committees with the exception of the Committee on Laws, Regulations and Legislation. The Chairman, James Mitchener, was not present and to date a Report had not been received. However, a later communication to the Secretary included the Report and this is printed as part of the record.

At this point, a ten minute recess was called with the meeting reconvening at 11 o'clock A.M. Presentation of committee reports continued in the following order: Pharmacists in Government Service, Charles G. Towne, *Chairman;* Program and Public Relations, Walter M. Frazier, *Chairman;* Minimum Standards, Clifton J. Latiolais, *Chairman;* and Membership and Organization, George F. Archambault, *Chairman.*

This completed the Committee Reports and President Godley had indicated in each instance that recommendations were being referred to the Committee on Resolutions.

Officer reports were then received from Sister Mary Berenice, Treasurer, and Gloria Francke, Secretary. In the latter report, Mrs. Francke supplemented the mimeographed material with actions taken at a meeting of the Executive Committee held on the previous Saturday, April 19. These actions have been included in the published Report appearing in the JOURNAL.

At this point, President Godley called on Mr. M. R. Kneifl, Secretary of the Catholic Hospital Association, to bring greetings. Mr. Kneifl expressed appreciation for the opportunity to work with ASHP members through the SOCIETY.

Reports were then received from Paul Parker, Director, and Dr. Robert P. Fischelis, Chairman, Policy Committee, of the Division of Hospital Pharmacy.

The meeting was then turned over to Vice-President Charles Barnett who introduced President Leo Godley for the Address of the President. Following the Address, Mr. Godley was given a standing ovation by the members. Vice-President Barnett turned the meeting back to President Godley who called for New Business.

Grover Bowles, Chairman of the Committee on Resolutions, was recognized. He introduced the following two resolutions, pointing out that these constitute amendments to the SOCIETY'S By-Laws. Therefore, to be acted on at this meeting, amendments to the SOCIETY'S By-Laws. Therefore mitted in writing by two active members at the First Session of the Annual Meeting of the SOCIETY and voted upon at the Final Session of the same Annual Meeting."

Increase In Dues

WHEREAS the SOCIETY grows and matures and becomes available and helpful to the individual practitioner as well as to the entire profession, so much more are the requirements in the way of energy, time, physical facilities and funds, now therefore be it

RESOLVED that Chapter V, Article 2 of the AMERICAN SOCIETY OF HOSPITAL PHARMACISTS be amended to read as follows:

"Dues for active and associate members shall be ten dollars ($10.00) per year, payable in advance;" and be it further

RESOLVED that this increase in dues become effective January 1, 1959.

Office of the Secretary

RESOLVED that Chapter II, Article 2 of the By-Laws of the AMERICAN SOCIETY OF HOSPITAL PHARMACISTS be amended to read as follows:

Article 2. Secretary. **The Secretary shall be the executive officer of the Society and shall work under the direction of the Executive Committee.* The Secretary shall keep minutes of the sessions of the SOCIETY and maintain a roster of its members. He shall notify individuals of their appointment to committees, notify members of the time and place of all meetings, and conduct the correspondence of the SOCIETY. He shall collect the dues of the members. The Secretary shall prepare and mail to all eligible voting members appropriate ballot forms for the annual voting of the SOCIETY. He shall be an ex-officio member of all standing committees. He shall assist, where possible, with the secretarial activities of all standing and special committees. He shall keep the President informed of all activities by forwarding to him copies of pertinent correspondence. He shall present a written report of his work to the Annual Meeting of the SOCIETY. The Secretary shall be Secretary of the House of Delegates. **He shall perform such other duties as may be assigned by the Executive Committee to implement the policies of the Society. He shall be empowered to use the title of Executive Secretary.*

Following the reading of the resolutions, it was noted that action is not required until the Final General Session on Tuesday when a vote will be taken.

President Godley then pointed out that he wished to introduce another matter on behalf of the Executive Committee. This concerned election of two honorary members to the AMERICAN SOCIETY OF HOSPITAL

*At this point, Dr. Joseph Burt, President of the American Pharmaceutical Association was present and President Godley called on him. Dr. Burt extended greetings on behalf of the officers and members of the Council of the A.Ph.A. along with best wishes for a successful meeting.

*Italics indicate addition to By-Laws.

PHARMACISTS. Reading from the Constitution, it was noted that "Nominations for Honorary Members shall be approved by unanimous vote of the Executive Committee and shall be presented for vote of the membership at the Annual Meeting." The following citations were then read:

ROBERT P. FISCHELIS, *Secretary and General Manager of the American Pharmaceutical Association, leader in American Pharmacy, prolific author of numerous publications in pharmacy, and ardent advocate of high ideals in our profession, in recognition of his outstanding work in behalf of hospital pharmacy in the United States; his wise counsel and helpful guidance to the Executive Committee of the Society, its officers, and committees, and his creative genius which evolved a method whereby the efforts of the American Pharmaceutical Association and the American Society of Hospital Pharmacists in the field of hospital pharmacy could be focused in a united service unit — the Division of Hospital Pharmacy, in recognition of these outstanding contributions, the Executive Committee of the Society unanimously nominates Dr. Robert P. Fischelis as an Honorary Member of the American Society of Hospital Pharmacists.*

MICHAEL RAYMOND KNEIFL, *Executive Secretary of the Catholic Hospital Association, Faculty Member at St. Louis University, Managing Editor of Hospital Progress, champion of educational and administrative standards of hospital pharmacy, in recognition of his advocacy of the role of the institute as an educational process in developing better hospital pharmacists; his creation of the point-rating techniques for evaluating hospital pharmacy practice; his leadership in the establishment of policy manuals as administrative guides in hospital pharmacy; his enthusiastic interest and support of hospital pharmacy at all times, in recognition of these outstanding contributions, the Executive Committee of the Society unanimously nominates Mr. M. R. Kneifl as an Honorary Member of the American Society of Hospital Pharmacists.*

President Godley then asked for unanimous acclaim and approval of the two Honorary Members. The membership assembled responded with a standing ovation. Both Dr. Fischelis and Mr. Kneifl were present and were recognized to which the group again responded with applause.

President Godley asked for a motion for adjournment. On the motion of Grover Bowles and second by James McKinley, the First General Session of the Annual Meeting adjourned at 12:35 P.M.

Second Session

The Second Session of the 1958 Annual Meeting was opened by President Godley on Monday, April 21 at 2 o'clock P.M. Following announcements, the President called for Unfinished Business of which there was none. The meeting was then turned over to Mr. Walter Frazier, *Chairman* of the Committee on Program and Public Relations. Mr. Frazier introduced speakers for presentation of the following papers during the Monday afternoon Session:

"New Patterns of Hospital Pharmacy Service," by Grover C. Bowles, Jr., Chief Pharmacist, Baptist Memorial Hospital, Memphis, Tenn.

"Rational Drug Therapy," by Austin Smith, Editor, Journal of the American Medical Association, Chicago, Ill.

"Application and Use of the American Hospital Formulary Service," by William Heller, Chief Pharmacist, University of Arkansas Hospital, Little Rock, Ark.

"Participation of the Hospital Pharmacist in Teaching in the Nursing School Program," by Sister M. Gonzales, Chief Pharmacist, and Gerard Wolf, Assistant Chief Pharmacist, both at Mercy Hospital, Pittsburgh, Pa. (Presented by Gerard Wolf).

"A New Concept in Labeling for Large and Small Hospitals," by Herbert L. Flack, Director, Pharmacy Service, and Fred G. Salfi, Pharmacy Resident, both at Jefferson Medical College Hospital, Philadelphia, Pa. (Presented by Allen L. Lister, Pharmacy Resident, Jefferson Medical College Hospital, Philadelphia, Pa).

"Requirements for the Establishment of Hospital Pharmacy Internships and the Accreditation Program," by Paul F. Parker, Director, Division of Hospital Pharmacy, American Pharmaceutical Association, Washington, D. C.

"A New Technique for the Preparation of Sterile Carcinogenic Pellets for Implantation in Experimental Animals," by Robert W. Case, Chief Cancer Research Pharmacist, Roswell Park Memorial Institute and Instructor, School of Pharmacy, University of Buffalo, Buffalo, N. Y.; Carl T. Brueckman, formerly Staff Pharmacist, Roswell Memorial Institute and presently with U. S. Army Medical Service Corps, Fort Sam Houston, Tex.; and Clifton J. Lord, Assistant Professor and Director, Hospital Pharmacy Division, School of Pharmacy, University of Buffalo, Buffalo, N. Y.

"The Necessity for a Bulk-Compounding Formula Compendium for Hospital Pharmacists," by Clifton F. Lord, Assistant Professor of Pharmacy and Director, Division of Hospital Pharmacy, School of Pharmacy, University of Buffalo; and Robert W. Case, Chief Cancer Research Pharmacist, Roswell Park Memorial Institute, and Instructor, School of Pharmacy, University of Buffalo, both of Buffalo, N. Y.

Although considerable discussion followed several of the papers, it is not possible to include details of comments in this Report. A verbatim report of the Annual Meeting is recorded.

It should be noted that during the Monday Afternoon Session, Mr. Frazier called on Dr. E. Fullerton Cook, formerly Chairman of the Committee on Revision of United States Pharmacopeia and Editor of Remington's *Practice of Pharmacy*. Dr. Cook complimented the SOCIETY and hospital pharmacists saying—"I see here pharmacy as it should be practiced, pharmacy at its best."

After thanking the speakers, Mr. Frazier turned the meeting back to President Godley for adjournment. The Second General Session adjourned at 4:45 P.M.

Third Session

The Third Session of the 1958 Annual Meeting was called to order at 9 o'clock A.M. on Tuesday, April 22 at the Auditorium of the Edison Building in Los Angeles. President Leo Godley opened the meeting and called for Business, of which there was none. The meeting was then turned over to Mr. Frazier who introduced speakers for presentation of the following papers:

"Plastics and the U.S.P. Requirement for Air-tight, Light-Resistant Containers," by George F. Archambault, Pharmacist Director, Chief, Pharmacy Branch, Division of Hospitals, Bureau of Medical Services, U. S. Public Health Service, Washington, D. C.

"Development of Research in Hospital Pharmacy," by Glenn L. Jenkins, Dean, Purdue University School of Pharmacy, Lafayette, Ind.

"Current Trends in Germicides," by Carl A. Lawrence, Director, Bureau of Laboratories, Los Angeles County Health Department, and Assistant Clinical Professor of Infectious Diseases, University of California Medical Center, Los Angeles, Calif.

"Effect of Plastics on Parenteral Products—1. Compatibility Studies of Plastic Syringes with Parenteral Products," by C. N. Dhorda, Graduate Student, and J. Autian, Assistant Professor of Pharmacy, both at University of Michigan, College of Pharmacy, Ann Arbor, Mich. (Presented by J. Autian.)

"A Study of the Factors Influencing Drug Prices in the Los Angeles Area," by Gerald Kramer, North Glendale Memorial Hospital, North Glendale, Calif.

Panel Discussion: "Poison Control Centers." R. Louis Verhulst, *Moderator*, Assistant Director, National Clearinghouse for Poison Control Centers, Department of Health, Education and Welfare, Washington, D. C. *Participants*: Clara Henry, East Oakland Hospital, Oakland, Calif.; Wendell Hill, Orange County Memorial Hospital, Orange, Calif.; Albert Picchioni, Professor of Pharmacology, University of Arizona, College of Pharmacy, Tucson, Ariz.; and Robert Simons, Memorial Hospital, Wilmington, Del.

Following presentation of the Panel, Mr. Frazier thanked the participants and the Third General Session was adjourned at 12:30 P.M.

Fourth Session

The Fourth and Final Session of the 1958 Annual Meeting convened at 2 o'clock P.M. with President Godley presiding. Following a call for Unfinished Business, the President called on Mr. John Edwin Smith, (Victoria, B.C., Canada) President of the Canadian Society of Hospital Pharmacists. Mr. Smith brought greetings on behalf of the Canadian Society and expressed appreciation for the opportunity to participate in the ASHP meetings. President Godley also called on Mr. Glenn Moir, the University of British Columbia, to give background regarding plans for the 1958 Canadian Institute on Hospital Pharmacy.

Following announcements, President Godley turned the meeting over to Walter Frazier for presentation of the Final Session of the program. Mr. Frazier introduced speakers for the following papers:

"Strip Packaging," by Robert Bogash, Director, Pharmacy Service, Lenox Hill Hospital, New York, N. Y.

"Role of an Antibiotics' Committee of the Medical Staff," by Sister M. Rebecca, Chief Pharmacist, St. Benedict's Hospital, Ogden, Utah.

"Current Trends in Antibiotic Therapy," by William L. Hewitt, Associate Professor of Medicine, University of California Medical Center, Los Angeles, Calif.

"Effectiveness of Enteric Coatings," by Orville Miller, Professor, School of Pharmacy, University of Southern California, Los Angeles, Calif.

"Improved Barium Sulfate Suspensions," by Joseph Beckerman, Assistant Chief Pharmacist, University of California Medical Center, Los Angeles, Calif.

The meeting was recessed for ten minutes and reconvened at 3:50 P.M. for the final business session.

President Godley called on Grover Bowles for the Report of the Committee on Resolutions. Clifton J. Latiolais also assisted in preparing the Report. A verbatim report of the discussions and actions on resolutions is available. However, for clarity and brevity, only the *final resolutions as adopted* are published. These appear on 701 of this issue of the JOURNAL.

Following the presentation of the Committee's Report, President Godley called for further resolutions and thanked the Committee by a rising vote of thanks on the part of the Assembly.

President Godley called for the Report of the Committee on Nominations. Sister Mary Florentine, chairman, presented the following Report:

For President: Jack Heard, University of California Medical Center, Los Angeles, Calif.; and Dr. William Heller, University of Arkansas Hospital, Little Rock, Ark.

For Vice-President: R. David Anderson, King's Daughters' Hospital, Staunton, Va., and Vernon O. Trygstad, Veterans Administration Center, Washington, D. C.

For Treasurer: Sister Mary Berenice, St. Mary's Hospital, St. Louis, Mo., and Sister Mary Gonzales, Mercy Hospital, Pittsburgh, Pa.

It should be noted that the treasurer is being elected for a three-year term beginning in 1959. Nominations for treasurer are made on the recommendation of the Executive Committee. The President and Vice-President are elected for a one-year term.

Following presentation of the Report, it was moved, seconded and carried that it be accepted. President Godley then called for nominations from the floor. It was moved, seconded and carried that the nominations be closed.

At this point, President Godley installed the following officers for the new term: *President:* Robert Bogash; *Vice-President:* Clifton Latiolais; *Secretary:* Gloria Francke; and *Treasurer:* Sister Mary Berenice. The incoming officers were welcomed and the meeting turned over to President Bogash. Following a few words, President Bogash turned the meeting back to Mr. Godley. A motion for adjournment was made and seconded and the Final Session of the 1958 Annual Meeting adjourned at 5:15 P.M.

report of the House of Delegates

April 20, 1958

GLORIA N. FRANCKE, *Secretary*

The Ninth Annual Meeting of the AMERICAN SOCIETY OF HOSPITAL PHARMACISTS was called to order by President Leo F. Godley at 2 o'clock on Sunday, April 20, at the Biltmore Hotel in Los Angeles, California. Mr. Godley welcomed the Delegates and, reading from the SOCIETY'S Constitution and By-Laws, outlined the purpose and functions of the House of Delegates. He then introduced Mr. Jack Heard, Chairman of the Local Committee in charge of planning for special events for members of the ASHP. Mr. Heard welcomed the group to Los Angeles and outlined plans as developed by the Local Committee.

Since the Report of the previous meeting of the House of Delegates was printed in *The Bulletin* (July-August 1957), the President asked for a motion for accepting the Report as printed. On the motion of Grover Bowles, and a second by Charles Barnett, it was moved and carried that the reading of the Report of the 1957 House of Delegates be dispensed with and accepted as printed.

President Godley called on Secretary Gloria Francke and Paul Parker, Director of the Division of Hospital Pharmacy, for the roll call of official delegates. A total of fifty-five accredited delegates, representing thirty-seven affiliated chapters, the executive committee, and chairmen of special committees responded to the roll call. Also present was one delegate representing the Colorado Society which has recently applied for affiliation with the national organization. Another group, the Appalachian Society (West Virginia), was represented, but not officially recognized because organization of such a chapter had not been called to the attention of the Secretary prior to the meeting.

At this point, President Godley called on representatives of the ASHP affiliated chapters in California to bring greetings. Joseph Beckerman, President of the Southern California Society, spoke on behalf of his organization. Others speaking on behalf of the California Chapters included Eric Owyang, Past President of the Northern California Society, and Mrs. Nivous Korander, Vice-President of the San Diego Society.

Committee appointments, including the Committee on Resolutions and the Committee on Nominations, were then announced. Although these Committees work and report at the Annual Meeting, in accordance with a recommendation made by the Executive Committee a few years ago, the Committee on Nominations and the Committee on Resolutions had been appointed prior to the Annual Meeting. The Committees as appointed by President Godley were as follows:

Committee on Resolutions: Grover C. Bowles, *Chairman;* Clifton Latiolais; Clara Henry; and Robert Bogash. *Assistants to Committee*: Claude Busick, William Heller, and Robert Lantos.

Committee on Nominations: Sister Mary Florentine, *Chairman;* Don E. Francke; and Paul F. Parker.

The chairmen of each of the committees named above presented preliminary reports to the House of Delegates, each indicating that recommendations from the membership would be welcome.

President Godley called for recommendations from officers, committee chairmen and delegates. Secretary Francke pointed out that all recommendations from officer and committee reports have been referred directly to the Committee on Resolutions, and, when necessary, to the Executive Committee for action. Affiliated chapters and members were also invited to submit recommendations.

President Godley then pointed out that the House of Delegates has the responsibility for election of the Secretary of the SOCIETY for a three year term. In accordance with the Constitution, the Secretary is nominated by the Executive Committee and submitted to the House of Delegates at the Annual Meeting. President Godley submitted the name of Gloria Francke as the nomination from the Executive Committee. Clara Henry moved that the nomination be approved by the House of Delegates. The motion was seconded by George Archambault and carried.

The roll call of Fraternal Delegates was then read by President Godley and those present were recognized at this time. Those officially representing the government services at the 1958 Annual Meeting of the ASHP included Colonel Leonard P. Zagelow, Department of the Air Force; Lieutenant Colonel William L. Austin, Department of the Army; Lieutenant Commander S. C. Pflag, Department of the Navy; Mr. Allen Brands, Public Health Service; and Mr. Vernon O. Trygstad, Veterans Administration. All the fraternal delegates were present at the ASHP meetings during the week and each brought official greetings during the General Sessions.

Other representatives of government services called upon at this time included Captain Willard C. Caulkins, Department of the Navy, and Mr. Thomas A. Foster, Office of Defense Mobilization.

Also introduced at this time were Mr. M. R. Kneifl, Executive Secretary of the Catholic Hospital Association, and Mr. Edwin Smith, President of the Canadian Society of Hospital Pharmacists. Mr. Smith brought greetings from the Canadian Society and expressed appreciation for the continuing inspiration received from the ASHP.

President Godley then called upon Sister Mary Berenice to present to the SOCIETY a plaque symbolizing the blessing bestowed upon the members of the AMERICAN SOCIETY OF HOSPITAL PHARMACISTS by Pope Pius XII. Presentation was made to the AMERICAN SOCIETY OF HOSPITAL PHARMACISTS with Mr. Paul Parker, Director of the Division of Hospital Pharmacy, accepting the Document on behalf of the ASHP.

The Blessing was requested by Reverend Mother Mary Concordia and Sister Mary Berenice of the Sisters of Saint Mary, Saint Louis, Missouri, during their visit to Rome, May 1957.

The Document (See page 506 of June issue of THE JOURNAL) will be framed and placed in the Office of the Division of Hospital Pharmacy.

President Godley then introduced Mr. Louis Jeffrey who presented a paper entitled "A Chapter Publication."

Following a ten minute recess, the President introduced members of a panel scheduled to discuss "Current Developments in Hospital Pharmacy." With President Godley serving as moderator, participants included M. R. Kneifl, Executive Secretary of the Catholic Hospital Association; George F. Archambault, Chairman of the Joint Committee of the American Hospital Association and the AMERICAN SOCIETY OF HOSPITAL PHARMACISTS; Paul Parker, Director of the Division of Hospital Pharmacy; Gloria Francke, Secretary of the ASHP; and Don E. Francke, Editor of the AMERICAN JOURNAL OF HOSPITAL PHARMACY and Program Director of the Audit of Pharmaceutical Services in Hospitals.

Among the subjects discussed during the panel were the following: changes in the SOCIETY'S publication, development of the American Hospital Formulary Service, information from the Audit of Pharmaceutical Service in Hospitals, Bulletin 16 of the Joint Commission on Accreditation of Hospitals (with reference to requirements for accreditation of pharmacy or drug room), safety practices, poison control centers, continuing education for hospital pharmacists, handling investigational drugs in hospitals, affiliated chapter activities, student membership, recruitment of hospital pharmacists, and stock control through use of IBM or similar systems.

Following the panel, President Godley introduced Robert C. Bogash for the Address of the President-Elect. (See page 696 for complete text of Address). Following the Address, President-Elect Bogash was given a standing ovation by delegates and members in attendance.

Announcements regarding meetings during the week were made and the meeting of the House of Delegates was adjourned at 5:15 o'clock.

. . . resolutions

passed at 1958 Annual Meeting

Actions taken at the Annual Meeting of the American Society of Hospital Pharmacists are the result of recommendations of its officers, committees, and delegates from affiliated chapters, and are expressed in the form of resolutions.

The resolutions submitted by the various groups were considered by the Committee on Resolutions under the chairmanship of Mr. Grover C. Bowles, and including the following additional members: Mr. Robert Bogash, Miss Clara Henry and Mr. Clifton Latiolais. Also serving as assistants to the Committee were the following: Mr. Claude Busick, Dr. William Heller, and Mr. Robert Lantos.

The resolutions were presented to the membership at the Annual Meeting and voted upon. The resolutions, as finally approved, are presented here.

1

Amendment to By-Laws—Increase in Dues

WHEREAS the SOCIETY grows and matures and becomes available and helpful to the individual practitioner as well as to the entire profession, so much more are the requirements in the way of energy, time, physical facilities and funds, now therefore be it

RESOLVED that Chapter V, Article 2 of the By-Laws of the AMERICAN SOCIETY OF HOSPITAL PHARMACISTS be amended to read as follows:

"Dues for active and associate members shall be ten dollars ($10.00) per year, payable in advance;" and be it further

RESOLVED that this increase in dues becomes effective January 1, 1959.

Resolution Number 1 was adopted and the membership will be informed regarding the change in dues rate. Also, the change will be noted in the By-Laws.

2

Amendment to By-Laws—Office of the Secretary

RESOLVED that Chapter II, Article 2 of the By-Laws of the AMERICAN SOCIETY OF HOSPITAL PHARMACISTS be amended to read as follows:

Article 2. Secretary. *The Secretary shall be the executive officer of the Society and shall work under the direction of the Executive Committee.* The Secretary shall keep minutes of the sessions of the SOCIETY and maintain a roster of its members. He shall notify individuals of their appointment to committees, notify members of the time and place of all meetings, and conduct the correspondence of the Society. He shall collect the dues of the members. The Secretary shall prepare and mail to all eligible voting members appropriate ballot forms for the annual voting of the Society. He shall be an ex-officio member of all standing committees. He shall assist, where possible, with the secretarial activities of all standing and special committees. He shall keep the President informed of all activities by forwarding to him copies of pertinent correspondence. He shall present a written report of his work to the Annual Meeting of the Society. The Secretary shall be Secretary of the House of Delegates. *He shall perform such other duties as may be assigned by the Executive Committee to implement the policies of the Society. He shall be empowered to use the title of Executive Secretary.*

Resolution Number 2 was adopted and the change will be noted in the By-Laws.

3

Constitution and By-Laws

WHEREAS the SOCIETY has grown to the point where changes should be made in the Constitution and By-Laws in order for the SOCIETY to function in a more democratic and effective manner, and which are vital to the future development and strengthening of the SOCIETY and of hospital pharmacy, and

WHEREAS the Committee on Constitution and By-Laws, after long and careful study wisely recommends:

1. that the present Executive Committee, which is predominantly an appointed body, be replaced by a Council which would be entirely an elected body;
2. that the House of Delegates be strengthened and be given more responsibility;
3. that a class of membership to be known as "Fellow of the AMERICAN SOCIETY OF HOSPITAL PHARMACISTS" be established;

now therefore be it

RESOLVED that the SOCIETY approve in principle these three major recommendations, and be it further

RESOLVED that the Committee on Constitution and By-Laws be instructed to incorporate these recommendations in the revision of the Constitution and By-Laws, and be it further

RESOLVED that the draft of the proposed Constitution and By-Laws be sent to all affiliated chapters of the SOCIETY for review.

Resolution Number 3 was adopted and has been referred to the Committee on Constitution and By-Laws.

4

Liaison with A.A.C.P.

WHEREAS it would be to the mutual interest of practitioners of hospital pharmacy and pharmaceutical education to confer on problems of mutual interest, now therefore be it

RESOLVED that the AMERICAN SOCIETY OF HOSPITAL PHARMACISTS explore with the American Association of Colleges of Pharmacy the possibility of establishing a joint committee or some suitable type of liaison for the discussion of mutual problems.

Resolution Number 4 was adopted and will be explored during the coming year.

5

Internship Accreditation

WHEREAS the Division of Hospital Pharmacy has accepted the responsibility for implementing the accreditation of hospital pharmacy internships, and

WHEREAS the Division has been granted funds through the SOCIETY'S Committee on Research and Development to launch the internship accreditation program, and

WHEREAS internship training in hospital pharmacy is being jeopardized by a lack of progress in getting the accreditation program under way, now therefore be it

RESOLVED that the SOCIETY strongly recommends to the Division of Hospital Pharmacy that implementation of the accreditation program be undertaken during this calendar year, and be it further

RESOLVED that if the accreditation program is not undertaken within this calendar year, membership opinion predicates that the SOCIETY must consider other means of carrying out this important activity, and be it further

RESOLVED that the Secretary of the SOCIETY be requested to forward a copy of this resolution to the Chairman of the Policy Committee and to the Director of the Division of Hospital Pharmacy.

Resolution Number 5 was adopted and has been referred to the Chairman of the Policy Committee and the Director of the Division of Hospital Pharmacy.

6

Responsibility of the Pharmacist in Academic Centers

WHEREAS there is increasing interest in using the personnel and facilities of hospital pharmacies in undergraduate and graduate teaching programs of colleges of pharmacy, and

WHEREAS the Minimum Standard for Pharmacies in Hospitals states that the Chief Pharmacist shall be responsible to the Director of the hospital for the administrative and professional policies of the Pharmacy Department related to patient service, now therefore be it

RESOLVED that the AMERICAN SOCIETY OF HOSPITAL PHARMACISTS encourage hospital pharmacists to accept faculty appointments and to participate in such programs, and be it further

RESOLVED that the AMERICAN SOCIETY OF HOSPITAL PHARMACISTS believes that, in pharmacy departments in which academic education and patient service activities are carried out, the Chief Pharmacist and/or his staff should be responsible to the Dean for all educational activities for which course credit is given by the College of Pharmacy, and to an administrative officer of the hospital for all service functions of the pharmacy department.

Resolution Number 6 was adopted and is being called to the attention of the membership.

7

Pharmacists in Government Service

WHEREAS the pharmacists in government service have not been accorded proper recognition and consideration of their professional education and training, be it

RESOLVED that the AMERICAN SOCIETY OF HOSPITAL PHARMACISTS go on record as supporting H.R. 6801 which will provide star rank for pharmacists in the government service as recommended by the combined National Committee on Status of Pharmacists in Government Service.

Resolution Number 7 was adopted and has been referred to the author of the bill and to the Chairman of the Committee on the Status of Pharmacists in Government Service.

8

Minimum Standards

WHEREAS revision of the Minimum Standard for Pharmacies in Hospitals is a vital project requiring the cooperation of all hospital pharmacists, and

WHEREAS proper coordination of efforts is essential for the development and completion of such a project, now therefore be it

RESOLVED that the long range plan for revising the present Minimum Standard for Pharmacies in Hospitals, as submitted by the Committee on Minimum Standards, be approved, and be it further

RESOLVED that the newly appointed Committee on Minimum Standards follow the general outline of this long-range plan, and be it further

RESOLVED that the affiliated chapters be encouraged to cooperate in this important project with the assistance of the Committees on Special Projects and Minimum Standards.

Resolution Number 8 was adopted and has been referred to the Chairmen of the Committees on Special Projects and Minimum Standards. It is also being called to the attention of the affiliated chapters through the JOURNAL.

9

Membership and Recruitment

WHEREAS it is essential for the life and well being of any professional society that there be an active and continuous interest in the recruitment of members, especially those practitioners new to the specialty, and

WHEREAS the 1957-58 Membership and Organization Committee has developed a method for an annual national and local membership drive, now therefore be it

RESOLVED that the AMERICAN SOCIETY OF HOSPITAL PHARMACISTS furnish to each chapter annually, a supply of recruitment brochures, and be it further

RESOLVED that with the transmittal of such brochures a copy of the "New Jersey Membership Plan" as modified by the report of the Committee on Membership and Organization be included with a letter from the Secretary, encouraging the adoption of this technique at the Chapter level, and be it further

RESOLVED that periodically, but at least once every three years, a national recruitment mailing to hospital administrators be undertaken, including with such mailing, an appropriate issue of the AMERICAN JOURNAL OF HOSPITAL PHARMACY, or a study report of special interest to hospital administrators.

Resolution Number 9 was adopted and will be reviewed by the Secretary with the Committee on Membership and Organization and the Executive Committee.

10

Safety Program in Poison Control

WHEREAS better laws for the control of poisonous items sold from outlets other than pharmacists are necessary, and

WHEREAS better laws for the labeling of hazardous substances are imperative, now therefore be it

RESOLVED that the AMERICAN SOCIETY OF HOSPITAL PHARMACISTS offer its assistance and cooperation to the Committee on Toxicology of the American Medical Association in furthering programs designed to promote safety in the control of poisonous and hazardous substances, and be it further

RESOLVED that if assistance is requested by the American Medical Association, the Committee on Laws, Regulations and Legislation and the Committee on Safety Practices and Procedures work through the Secretary of the SOCIETY in these activities

Resolution Number 10 was adopted and has been referred to the Secretary of the Committee on Toxicology of the American Medical Association.

11

Revisions of the A.H.F. Chapter on Poisons

WHEREAS the Committee on Economic and Household Poisons, by virtue of the activities in which it is involved, can be of valuable assistance in the preparation of the chapter on "Poisons and Their Antidotes" of the American Hospital Formulary Service, now therefore be it

RESOLVED that the Committee on Economic and Household Poisons be requested to cooperate with and assume certain responsibilities in future revisions of this section of the Formulary as may be delegated by the Director of the American Hospital Formulary Service.

Resolution Number 11 was adopted and has been referred to the Committee on Economic and Household Poisons.

12

Safety Practices and Procedures

WHEREAS the Joint Committee of the ASHP and the American Hospital Association has recognized the need for safety practices and procedures covering the storage, control, dispensing, and administration of drugs in hospitals, nursing homes, and homes for the aged, and

WHEREAS it has now been emphasized by the special Committee on Safety Practices and Procedures that this is a most serious and important problem involving patient and employee safety, now therefore be it

RESOLVED that

1. The SOCIETY pursue the feasibility of formalizing liaison with the National League for Nursing, as suggested by the Joint Committee, for the purpose of formulating proper safety guides for the handling of medications in hospitals,
2. The SOCIETY endorse the labeling suggestions which the Committee on Safety Practices and Procedures has made to the manufacturers and to the Federal and State Food, Drug and Cosmetic authorities,
3. Because of the interest shown in these safety studies by the Director of Revision of the U.S.P., he be informed of the final actions of this program as such actions relate to the labeling of drugs and chemicals,

4. The official ASHP delegate to the Congress of the International Pharmaceutical Federation in Brussels to participate in the Section on Hospital Pharmacy by introducing, if possible, a copy of this year's Report of the Committee on Safety Practices and Procedures and to report to this Committee new ideas gained from the discussion at the conference.
5. The accident survey initiated by the Committee on Safety Practices and Procedures be continued, and
6. Affiliated Chapters of the Society be urged to implement local programs on safety practices and procedures as outlined in this year's report of the Committee on Safety Practices and Procedures.

Resolution Number 12 was referred to the Executive Committee for study.

13

Investigational Drugs

Whereas the Joint Committtee of the ASHP and the American Hospital Association, in an effort to further increase patient safety, has developed a Statement of Principles Involved in the Use of Investigational Drugs in Hospitals, now therefore be it

Resolved that the American Society of Hospital Pharmacists go on record to approve this statement of principles on the use of investigational drugs in hospitals.

Resolution Number 13 was adopted and has been referred to the Secretary of the Joint Committee of the ASHP and A.H.A.

14

Compendium of Bulk Compounding Formulas

Whereas, the growing need for a single reference similar to the Pharmaceutical Recipe Book of the American Pharmaceutical Association to supplement the American Hospital Formulary Service has long been recognized by leaders of the Society, now therefore be it

Resolved that the President of the Society be requested to appoint a special committee to study the feasibility and advisability of the Society publishing a compendium of bulk compounding formulas.

Resolution Number 14 was adopted and has been referred to the President of the Society.

15

Seminars on Hospital Pharmacy

Whereas many of the Affiliated Chapters of the Society have been active in promoting seminars in hospital pharmacy which contribute immeasurably toward continuing education in the field, now therefore be it

Resolved that the American Society of Hospital Pharmacists encourage the continuation of this type of meeting in the state and local chapters, and be it further

Resolved that the American Society of Hospital Pharmacists express its sincere thanks and appreciation to Pfizer Laboratories for its interest and support of the Seminars conducted in cooperation with the Affiliated Chapters.

Resolution Number 15 was adopted and has been referred to Pfizer Laboratories. The resolution is also being called to the attention of the affiliated chapters through the Journal.

16

Time of Annual Meeting

Whereas the change in time of the Convention of the American Pharmaceutical Association experienced these last few years conflicts with the schedules and interests of many hospital pharmacists, now therefore be it

Resolved that the American Society of Hospital Pharmacists request the American Pharmaceutical Association to study the possibility of holding the Annual Convention during the summer.

Resolution Number 16 was adopted and has been referred to the Secretary of the American Pharmaceutical Association.

17

Bill H.R. 765

Whereas Bill H.R. 765 is designed to foster and encourage higher education by permitting parents or sponsors of students in private colleges and universities to Federal Income Tax credit of thirty percent (30%) up to a maximum of $450.00, and

Whereas enactment of this Bill into law would be of considerable benefit to higher education in this nation generally and in particular to our non-state supported schools and colleges of pharmacy, be it

Resolved that the American Society of Hospital Pharmacists endorse this measure, and be it further

Resolved that a copy of this resolution be forwarded within the next 15 days to the Chairman of the House Ways and Means Committee in Washington, which committee is currently studying this Bill.

Resolution Number 17 was adopted and has been referred to the Chairman of the House Ways and Means Committee.

18

Appreciation to Pope Pius XII

Whereas His Holiness Pope Pius XII has graciously bestowed upon the members of the American Society of Hospital Pharmacists his personal Blessing for their professional activities, and

Whereas recognition of the members of the Society in this significant manner was made possible through the Sisters, and

Whereas the symbolic presentation of this Blessing was made by Sister Mary Berenice at this Annual Meeting, be it

Resolved that this Society is most appreciative of this high honor, and be it further

Resolved that a copy of this resolution be sent to His Holiness Pope Pius XII, and a copy also transmitted to Sister Mary Berenice.

Resolution Number 18 was adopted and a letter of appreciation has been transmitted to His Holiness Pope Pius XII.

19

Appreciation

Resolved that the American Society of Hospital Pharmacists express its sincere appreciation to:

The American Pharmaceutical Association, and especially to the Executive Secretary, Dr. Robert P. Fischelis, for the valuable assistance given to hospital pharmacy and to the Society during the past year.

The American Hospital Association, and in particular to Dr. Edwin L. Crosby, its Director, Mr. Tol Terrell, its President, and also to its Council on Professional Practice for their effective cooperation in furthering better hospital pharmacy practice.

The Catholic Hospital Association, and in particular to Mr. M. R. Kneifl, its Executive Secretary and the Committee on Pharmacy Practice, for the activities of the Association in promoting better hospital pharmacy practice.

Resolution Number 19 was adopted and has been referred to the proper individuals.

20

Appreciation to Committees and Individuals Responsible for Annual Meeting

Resolved that the American Society of Hospital Pharmacists express its thanks and appreciation to all the thoughtful people and organizations who extended to the Society's members and guests the excellent program arrangements, the many fine services, accommodations, and entertainment features of this Fifteenth Annual Meeting held in Los Angeles.

Resolution Number 20 was adopted and letters of appreciation have been sent to the individuals and Committees named.

reports of Officers and Committees

Report of the Secretary

GLORIA N. FRANCKE

This past year has been particularly busy from the standpoint of Society activities and new areas of endeavor in which the American Society of Hospital Pharmacists is engaged. Fortunately, the increased impetus in activities has not been a direct burden on the Secretary since the President, the Treasurer, other officers and committee chairmen, and the Director of the Division of Hospital Pharmacy have all been concerned with the many activities at hand. As a result, much of the work concerned with carrying out these activities is shared by a number of leaders in the Society.

Although I would like to report to you on the major activities in the Society and actions of the Executive Committee during the past year, there may be some duplication since you are also hearing reports from various officers and committee chairmen. I will report to you on the following: Actions on Resolutions Passed at the 1957 Annual Meeting; Election of Officers; ASHP Executive Committee actions; Work with Allied Groups; Membership and Affiliated Chapters; and Finances.

In reporting to you then, I shall be concerned chiefly with the work which is carried out directly from the Secretary's Office and the work of the Executive Committee.

As a matter of record, correspondence relating to Society activities is carried out by the Secretary to the extent possible. This is usually concerned with our relationships with allied groups, arrangements for the program and other details for the Annual Meeting (in cooperation with the Chairman of the Committee on Program and Public Relations, the Local Committee, and others concerned with arrangements), correspondence with the Executive Committee, work with the various special committees, and some correspondence with affiliated chapters. It should be pointed out also that considerable Society correspondence is handled by Paul Parker through the Division of Hospital Pharmacy. This is concerned chiefly with membership in the Society, affiliated chapter correspondence, subscriptions to the American Journal of Hospital Pharmacy, special requests regarding Society activities, and special mailings to the ASHP membership. With regard to the latter, it should be noted that special mailings during the past year have included the following: (1) election mailing; (2) letter from the ASHP President regarding ASHP relationship with the National Pharmaceutical Council; (3) membership dues bills, including a special request for statistical information on each member; and (4) mailing of the program for the Annual Meeting, including a special letter from President Godley regarding support of the American Institute of the History of Pharmacy. In addition, the Division of Hospital Pharmacy has sponsored special mailings. Pending at the present time is a mailing to all hospital administrators in the country transmitting a copy of the "Suggested Regulations for Handling Narcotics in Hospitals," along with A.Ph.A. and ASHP membership applications. This mailing is being carried out in cooperation with the Division of Hospital Pharmacy and the A.Ph.A. and will carry letters from both the Secretary of the ASHP and the Secretary of the A.Ph.A.

It should also be mentioned that a continuous membership campaign is carried out through the Division of Hospital Pharmacy and this is concerned with inviting all hospital pharmacists who are not members of the A.Ph.A. and the ASHP to join. This activity is coordinated, to the extent possible, with the office of the Secretary.

Actions on Resolutions

Since actions on resolutions passed at the 1957 Annual Meeting might be considered old business, I shall first review these with you. A resolution passed at the 1956 Annual Meeting asked that the Secretary of the Society report each year at the Annual Meeting of the House of Delegates on the current status of all resolutions passed at the previous Annual Meeting of the Society. As indicated to you last year, reporting in detail on actions taken on the many resolutions passed would require considerable time. However, to expedite matters, the resolutions adopted at the 1957 Annual Meeting along with actions taken were transmitted to the ASHP affiliated chapters on May 11, 1957. Further, the resolutions were published in the July-August (1957), page 466, issue of *The Bulletin of the American Society of Hospital Pharmacists.*

For your information, in each specific case, resolutions have been referred to the proper individuals and organizations. The Executive Committee has acted on resolutions requiring funds and plans for implementation.

It can therefore be assumed that the membership has been kept informed regarding actions on resolutions and further developments in this area are being reported to you under "ASHP Executive Committee Actions."

Election of Officers

In accordance with a request from the Secretary, Mr. Paul Parker was asked to carry out the ASHP election activities. Ballots for the election of officers were mailed from the Office of the Division of Hospital Pharmacy to all active members of the Society. The Canvassing Committee, appointed by President Leo F. Godley, included: R. David Anderson, King's Daughters' Hospital, Staunton, Virginia; Franklin Cooper, George Washington University Hospital, Washington, D. C.; Herbert L. Flack, Jefferson Medical College Hospital, Philadelphia, Pennsylvania; and Vernon O. Trygstad, Veterans Administration Central Office, Washington, D. C. Officers elected for the coming year include: *President*, Robert C. Bogash, Lenox Hill Hospital, New York, New York; *Vice-President*, Clifton J. Latiolais, Audit of Pharmaceutical Service in Hospitals, University Hospital, Ann Arbor, Michigan.

As you know, the President and Vice-President are elected for a one-year term and the Treasurer and Secretary for three-year terms. The present Treasurer, Sister Mary Berenice of St. Mary's Hospital, St. Louis, Missouri, has a three-year term which will expire at the 1959 convention. Accordingly, nominations for Treasurer will be received at the 1958 Convention and voted on during the current year.

The Secretary of the Society is nominated by the Executive Committee and elected every three years by the ASHP House of Delegates. The term of your present Secretary expires with the 1958 (this) Annual Meeting and the election is to be held during this same Annual Meeting.

ASHP Executive Committee Actions

The Executive Committee of the American Society of Hospital Pharmacists held two official meetings during the 1957-1958 year. Usually, the Committee meets but once a year. However, through the years, it has been noted that the great amount of Society business at hand often makes it difficult to cover everything within a two or three day period. Also, this past year has presented numerous areas of activity requiring a great deal of attention by the Executive Committee. Of great significance has been our work with the representatives of the National Pharmaceutical Council, negotiations in connection with placing our publication on a monthly basis, work toward implementing the *American Hospital Formulary Service* during the current year, participation in the Fourth Pan-American Congress of Pharmacy and Biochemistry, and numerous other activities. As a result, it has been advantageous for the Executive Committee to hold two meetings this past year and the efforts of the group have been most commendable.

The first meeting was held at Hotel Dupont Plaza in Washington, D. C. on November 2 and 3. As will be noted, this was held immediately prior to the Fourth Pan-American Congress of Pharmacy and Biochemistry so that members of the Executive Committee would also have an opportunity to participate in this important event which meets in the United States only once over a period of many years. In connection with this, the members of the Executive Committee took considerable responsibility in connection with participating in the Section on Hospital Pharmacy and entertaining the hospital pharmacists from Latin American countries attending the Pan-American Congress.

The second meeting of the Executive Committee was held on January 23, 24, 25, and 26 at Brook Lodge in Kalamazoo, Michigan. Brook Lodge was made available to us through the Upjohn Company and the facilities offered were most conducive to carry out the business at hand.

Members of the Committee attending both meetings included: Leo F. Godley, Charles B. Barnett, Gloria N. Francke, Sister Mary Berenice, George F. Archambault, Clifton J. Latiolais, Charles G. Towne, Walter M. Frazier, Paul F. Parker, and Robert C. Bogash. Others invited to participate in the various parts of the meeting included: Dr. Robert P. Fischelis, Secretary of the American Pharmaceutical Association; Mr. Joseph Oddis, Staff Representative of the Council on Professional Practice of the American Hospital Association; Dr. William Heller, Chairman of the Society's Committee on Pharmacy and Pharmaceuticals; and Dr. Don E. Francke, Editor of the American Journal of Hospital Pharmacy. Grover C. Bowles also participated in parts of the first meeting of the Executive Committee and, although invited to the Kalamazoo meeting, was not able to attend.

It should be noted by the membership that the members of the Executive Committee play an important role in guiding the affairs of the Society. To do this, each individual serving on the Executive Committee gives a great deal of time and effort to this activity. Although it is not possible to report the details of actions taken by the Executive Committee during the year, among the actions taken which are of particular significance are the following:

—Actively participated in the Pan-American Congress of Pharmacy and Bio-

chemistry held in Washington, D. C., November 3-9.

—Approved placing the Society's publication, now known as the American Journal of Hospital Pharmacy, on a monthly basis.

—Appointed the Editor of the American Journal of Hospital Pharmacy for a five-year term.

—Developed plans for carrying out negotiations with regard to matters of mutual interest to the National Pharmaceutical Council and the American Society of Hospital Pharmacists.

—Considered long-range plans for Society activities.

—Approved program plans and local arrangements for the 1958 Annual Meeting in Los Angeles.

—Considered general arrangements and program for 1958 Institutes on Hospital Pharmacy.

—Agreed that program arrangements for Institutes should be worked out in cooperation with a representative of the A.H.A., the A.Ph.A. and the ASHP.

—Made tentative plans for future Institutes.

—Approved a three-year plan for revision of the Minimum Standard for Pharmacies in Hospitals.

—Reconsidered and approved a special reduced dues rate in the ASHP for enlisted members of the Armed Services, this to apply to those who fall in the military membership category in the A. Ph.A. Such a change is to be incorporated when the Constitution and By-Laws are revised.

—Approved a mailing of a reprint of the "Suggested Regulations for Handling Narcotics in Hospitals," to all hospital administrators in the country. This is being done in cooperation with the Division of Hospital Pharmacy and the American Pharmaceutical Association.

—Considered a brochure for interesting hospital pharmacists in membership in the Society.

—Approved affiliation of the South Carolina Society of Hospital Pharmacists.

—Considered affiliation of the Colorado Society of Hospital Pharmacists. (Affiliation is pending clarification of membership status.)

—Considered a permanent membership certificate for ASHP members. (not approved.)

—Made final plans for promoting, publishing and distributing the *American Hospital Formulary Service*.

—Reviewed Society activities being carried out by the Division of Hospital Pharmacy.

—Reviewed actions and work of the Joint Committee of the American Hospital Association and the American Society of Hospital Pharmacists.

—Considered plans for giving appropriate recognition to H. A. K. Whitney and Edward Spease, recently deceased honorary members of the Society.

—Considered recommendations for changes in the Society's Constitution and By-Laws.

—Reviewed activities of all Special Committees submitting interim reports to the Executive Committee.

—Gave careful consideration to the work of the Committee on Safety Practice and Procedures.

—Approved working with the National League for Nursing with regard to safety procedures relating to drug distribution in hospitals.

—Recommended further exploration of the activities of the Committee on Disaster Preparedness with attention directed toward the role of the hospital pharmacist in this activity.

—Approved Society sponsorship of a program to promote the exchange of pharmacy students and recent graduates between foreign countries and the United States.

—Approved the Society having official representation at the meeting of the International Pharmaceutical Federation in Brussels in September.

—Nominated Gloria Francke for a three-year term as Secretary of the Society beginning in 1958. (The Secretary is nominated by the Executive Committee and elected by the House of Delegates.)

—Considered possible means of making professional liability insurance available to members of the Society.

—Agreed to consider for distribution material being compiled by the Committee on Economic and Household Poisons.

—Approved the 1958 Society budget.

—Approved the action of the Board of Selections (Committee on Research and Development) with regard to making the following grants for research to:

Alex Berman, Assistant Professor, College of Pharmacy, University of Michigan, Ann Arbor, Mich. "The Development of the Printed Hospital Formulary from 1642 to the Present."

John W. Webb, Assistant Pharmacist-in-Chief, Massachusetts General Hospital, Boston, Mass. "The Suitability of 1:6-Di-4 Chlorophenyl diguanidinohexane as an Antibacterial Agent in Ophthalmic Solutions."

James Elieff, Veterans Administration Center, Los Angeles, Calif. "Determination of the Self-Sterilizing Properties of Electrolyte Concentrate Solutions of Ammonium Chloride, Potassium Chloride, Sodium Chloride, Calcium Acetate, Sodium Lactate, Sodium Bicarbonate, and Hydrochloric Acid."

Donald M. Friedman, Veterans Administration Center, Los Angeles, Calif. "Self-Sterilizing Ophthalmic Solutions."

Calvin G. Gilliam, Veterans Administration Center, Los Angeles, Calif. "Assay Procedures and Stability Studies of Galenical Solanaceous Alkaloids in Popular Pharmaceutical Combinations."

William M. Heller, Chief Pharmacist, University of Arkansas Medical Center, Little Rock, Ark. "Packaging of Sodium Chloride Solution U.S.P."

Paul F. Parker, Director, Division of Hospital Pharmacy, American Pharmaceutical Association, Washington, D.C. "Hospital Pharmacy Internship Approval Program."

Herbert L. Flack, Chief Pharmacist, Jefferson Medical College Hospital, Philadelphia, Pa. "A Filing and Classification System for Hospital Pharmacy."

Gerald M. Kramer, North Glendale Hospital, Glendale, Calif. "Factors Influencing Drug Charges in Hospitals in the Los Angeles Area."

Don E. Francke, University Hospital, Ann Arbor, Mich. "Selected Annotated Bibliography on Hospital Pharmacy."

A meeting of the Executive Committee was also held yesterday (April 19) here in Los Angeles. Members of both the present and the new Executive Committee were present. Additional actions taken at that time are as follows:

—Considered a Report from the Special Committee set up to make recommendations concerning paying proper tribute to H. A. K. Whitney and Edward Spease.

—Further considered and approved final plans for implementing, promoting, and distributing the Formulary Service.

—Considered specific changes in the Society's By-Laws for recommendation at this meeting.

—Considered each of the Annual Reports of the Officers and Committees.

—Gave unanimous approval to the election of two Honorary Members to the Society.

—Reviewed the work of the Committee on Research and Development.

It should also be noted that matters that come up between Executive Committee meetings are handled through correspondence with the members.

Membership and Affiliated Chapters

The Chairman of the Committee on Membership and Organization is reporting to you with regard to membership statistics. This will undoubtedly be supplemented by further detail regarding the day to day membership activities by Paul Parker, Director of the Division of Hospital Pharmacy. As you know, membership work has continued to be carried out in the Washington Office and this activity is concerned with the routine handling of membership dues, keeping up the membership list as well as carrying on a continuing membership campaign. In this area, the American Pharmaceutical Association, through the Division of Hospital Pharmacy, has made a significant contribution to the Society.

It should be noted that, under the present membership arrangement and the agreements between the A.Ph.A. and the ASHP, it is essential that membership activities be carried on in the office of the American Pharmaceutical Association. I am sure that each of you knows the reason for this in that membership in the parent organization is prerequisite to joining the Society. This not only requires a checking of membership in the A.Ph.A. when a *new* member joins, but must be followed through each year as renewals are received. This task alone required a great deal of detail and coordination of membership in the two organizations.

During the year I have been in close touch with the Society's 48 affiliated chapters and, as noted under "ASHP Executive Committee Actions," two new affiliates have been accepted during the past year. There are two or three other groups contemplating affiliation.

Again, I would like to report to you that the ASHP affiliated chapters continue to be a source of great strength to the Society. Although I cannot give you specific information, it appears that a high percentage of our affiliated chapters are active, that is holding regular meetings and reporting regarding activities and membership work. There is a great deal which could be done in this area and your Executive Committee is giving attention to proposed activities for affiliated chapters and making it possible for leaders in hospital pharmacy to visit the chapters at least once every several years.

During the past year, the Executive Committee again took action emphasizing the fact that all members of affiliated chapters must be members of the national organizations. I am sure that you can readily understand the difficulties in enforcing this, particularly when chapters wish to invite non-members to meetings to interest them in local activities. However, it is the firm conviction of the Executive Committee that this requirement of our Constitution and By-Laws must be met. As you know, the affiliated chapters are *required* to send a list of members to the Society each year prior to the Annual Meeting. This information is used for determining not only the number of dele-

gates in the House of Delegates, but also to make an actual check on membership in the A.Ph.A. and the ASHP.

Finances

Society finances have continued to be handled in the same manner as during past years. Your Treasurer is reporting to you on the current status of Society finances and I would like to give you a few additional details which are particularly concerned with looking toward the future.

Our first major concern in the immediate future is that of launching the *American Hospital Formulary Service*. As you know, much of the work which has been done toward this activity during the past three or four years has been on a voluntary basis. However, it is intended that the Formulary Service eventually be placed on a self-supporting basis and that all activities, that is to the extent feasible, be paid for accordingly. It is true that we will always have to depend on some voluntary help in connection with the professional activities. During this Annual Meeting you will hear a detailed report on the status of the Formulary Service and this will give you the further background. My chief concern in reporting to you at this time is to indicate that the Executive Committee is working hard to make financial arrangements for getting the Service underway. Fortunately, our printer has agreed to go ahead with publishing the Formulary without payment until copies are sold. At the same time, we are obligating the Society for fifteen to twenty thousand dollars. We are moving forward with confidence and our current budget has been set up for two thousand dollars for the Formulary Service in 1958. This amount will cover the very basic costs for professional services in connection with preparing the monographs. We still have a problem of "promotion" for which the Executive Committee has set a top figure of fifteen hundred dollars for 1958. Although this amount has not been budgeted, there are two possible sources of income on which we can depend. These are (1) additional membership (that is, above the figure used for preparing the budget) or (2) using part of our savings fund. As each of you know, fifteen hundred dollars is a minimum amount for promoting a service of this type and it will not permit us to advertise to any great extent. We shall therefore have to depend on our own people and you as hospital pharmacists to assist in this activity. We will, of course, do everything possible to publish detailed information in the hospital and pharmaceutical journals, keep our membership and affiliated chapters well informed, and pursue some satisfactory media for informing hospital people.

Work with Allied Groups

Your President has reported to you in detail regarding the Society's activities in working with other organizations in the health field. Actually, during the past year, the American Society of Hospital Pharmacists has been called upon in many instances in connection with joint efforts with other groups. As a matter of record, I shall mention only the names of the organizations with which we are working closely and you will receive details from other reports.

First, and above all, we should mention our continuing relationship with the American Pharmaceutical Association through the Division of Hospital Pharmacy. The Society has relied greatly on the parent organization and the staff at A.Ph.A. Headquarters. Dr. Robert P. Fischelis, Secretary of the A.Ph.A., has not only given us helpful advice as needed, but has continued to provide the administrative setup at A.Ph.A. Headquarters for handling the various activities mentioned. Also, Mr. Paul Parker, as Director of the Division of Hospital Pharmacy, has been in continual contact with Society activities and has given assistance in many projects now underway. Certain areas of activity, such as membership, constitute day to day routine, but in addition, there are special projects from time to time. It should also be mentioned that the bookkeeper at the American Pharmaceutical Association has continued to handle the financial books for our publication. This has undergone some changes this year due to changing from a bimonthly to a monthly publication.

Also of great importance to the Society has been our work with the American Hospital Association. As each of you knows, the Institutes have continued to be handled by the American Hospital Association in cooperation with A.Ph.A. and the ASHP. Under a current arrangement, the Director of the Division of Hospital Pharmacy has been asked by the Executive Committee of the Society to work with Mr. Joseph Oddis, Staff Representative of the Council on Professional Practice at the American Hospital Association, with regard to the administrative aspects of handling Institutes. Also, the Society asked that a representative of the ASHP be consulted with regard to the program each year. This action is considered important from the standpoint of always having a practicing hospital pharmacist actively engaged in setting up the Institute program.

Also, our work with the Joint Committee of the American Hospital Association and the American Society of Hospital Pharmacists has been most rewarding during the past year. Numerous areas of activity which are of concern to hospitals and to hospital pharmacy practice have been considered by this Committee during the past year. Actions of particular note are reported to the membership through our publication as well as through *Hospitals*, Journal of the American Hospital Association.

Here it should be mentioned that Mr. Joseph Oddis, Staff Representative of the A.H.A.'s Council on Professional Practice, has been most helpful in working with the Society. His participation in our activities, as well as providing services, has meant a great deal.

Our relationships with the Catholic Hospital Association have also been most cordial. The C.H.A.'s Committee on Pharmacy Practice and Mr. M. R. Kneifl, Executive Secretary, continue to make significant contributions to hospital pharmacy through their Annual Institutes, publication of pharmacy papers in *Hospital Progress* and other areas of endeavor.

The Society has worked with the American Association for the Advancement of Science in sponsoring sessions on hospital pharmacy at the Pharmacy Section of their annual meeting. During this past year, this activity was in charge of Dr. George Archambault and Mr. Joseph Oddis. Currently, Dr. Archambault has been elected Chairman of the Section on Hospital Pharmacy and Mr. Joseph Oddis will represent the Society for a three-year term on the AAAS Committee at Large. Mr. Oddis will also be responsible for working with the Secretary of the

Report of the Treasurer

SISTER MARY BERENICE

Balance and Receipts

January 1, 1957 — December 31, 1957

BANK BALANCE January 1, 1957		$ 3,264.74
RECEIPTS		
From Dues	$12,163.85	
Contribution from S.E. New York State Society Annual Meeting	326.06	
Total Receipts		$12,489.91
Total Balance and Receipts		$15,754.65

Disbursements and Cash Balance

DISBURSEMENTS		
Annual Meeting Expenses	$ 1,216.03	
Audit	35.00	
Certificates & Membership Cards	165.78	
Contributions	500.00	
Expense of Election	287.71	
Postage and Express	721.83	
Publication of Annual Reports (1957)	1,500.00	
Savings Fund	500.00	
Special Activities	907.70	
Stationary and Office Supplies	390.51	
Telephone and Telegraph	393.00	
Travel—Officers and Committees (Including Meeting of Executive Committee)	3,674.98	
*Formulary Service	1,000.00	
Office of the Secretary (Typing, Clerical)	91.20	
Miscellaneous	15.39	
Total Disbursements		$11,399.13
BANK BALANCE—Cash on Hand December 31, 1957 Checking acct., Riggs National Bank, Washington, D.C.		4,355.52
TOTAL DISBURSEMENT AND BALANCE		$15,754.65

Statement Of Savings

Balance in National Savings and Trust Company, Washington, D.C., 12/31/57	$ 2,088.38

**Does not include telephone, travel and miscellaneous expense incurred in connection with Formulary Service.*

Section and arranging sessions on hospital pharmacy.

Also worthy of mention is our continuing efforts to work with the American Institute of the History of Pharmacy. We have relied on the Director of the Institute for helpful advice from time to time and a number of our members have actively supported the work of the Institute. Just recently, President Leo Godley directed a letter to the membership encouraging individual hospital pharmacists to support the A.I.H.P.

As reported to you by the Chairman of the Committee on Safety Practices and Procedures, plans are also underway to work with the National League for Nursing in connection with the activity of this Committtee. It is anticipated that a Joint Committee of the two groups will be set up and this has had the endorsement of the Joint Committee of the A.H.A. and the ASHP.

Our work with the National Pharmaceutical Council is being reported to you by our President as well as the fact that he reported directly to the membership in the form of a letter dated October 30, 1957. As a matter of record this letter was reproduced in *The Bulletin* 14:705 (Nov.-Dec.) 1957.

Conclusion

In closing, I would like to express my appreciation to each of you—the members of the AMERICAN SOCIETY OF HOSPITAL PHARMACISTS. Your interest, enthusiasm and contributions are the greatest factors in progress in hospital pharmacy.

Report of the Committee on Minimum Standards

CLIFTON J. LATIOLAIS, *Chairman*

There is an increasing recognition in all important areas of health care that standards are basically and promotively essential to progress. The ASHP has continually promoted the Minimum Standard for Pharmacies in Hospitals and this standard has played an essential role in the progress of hospital pharmacy.

The Committee on Minimum Standards, in the SOCIETY'S By-Laws, has been assigned the responsibility for reviewing the Standards in light of modern principles of hospital pharmacy practice and to make necessary recommendations for revision.

This year, the Committee on Minimum Standards initiated a long-range plan for revising the present "Minimum Standard for Pharmacies in Hospitals." This plan will require from three to four years before a final revision is submitted to the SOCIETY for approval.

In developing Minimum Standards, it should be borne in mind that due consideration should be given to the relative values of individuality and conformity. Thus, it is essential that proper attention be given to coordinating the needs and desires of all concerned. So the Committee on Minimum Standards has incorporated in its long-range plan a means whereby all the members of the SOCIETY are given an opportunity to contribute their ideas and recommendations on the revision of the Minimum Standard. It was felt that this could best be accomplished by working through the affiliated chapters.

To initiate the first phase of the long-range plan for revising the Minimum Standard, this year's Committee requested all the affiliated chapters of the SOCIETY to: (1) undertake as a special project, a critical study of the present Minimum Standard for Pharmacies in Hospitals; (2) critically review the six sections of the Standard and make suggestions and recommendations as to whether additions, deletions, or changes should be made; and (3) make any other comments or recommendations on the Minimum Standard which may be of value to the Committee in the revision of this document.

The Committee on Minimum Standards requested the Committee on Special Projects to contact every affiliated chapter to urge them to undertake this important project. This has been accomplished and a large number of chapters have agreed to review the Minimum Standard and submit their recommendations. In addition to the suggestions and recommendations of affiliated chapters, the views of individuals as well as those of interested organizations will be taken into consideration prior to drafting a revision of the Minimum Standard.

Many suggestions have already been accumulated by this year's Committee. These suggestions are being compiled and will be turned over to the 1958-59 Committee on Minimum Standards. During the next year this Committee should continue to work with affiliated chapters until all the suggestions have been turned in. In addition, suggestions from related organizations, such as the Joint Commission on Accreditation of Hospitals, the American and Catholic Hospital Associations, should be obtained. Also, the completion of the Audit of Pharmaceutical Service in Hospitals this year will provide significant information bearing on current standards of practice and will be particularly helpful in revising the Minimum Standard.

The accumulation and collation of all this data by next year's Committee on Minimum Standards would complete the first phase of the long-range revision plan.

The second phase would be assumed by the 1959-60 Committee on Minimum Standards. This Committee would be responsible for preparing a first draft revision of the Minimum Standard for Pharmacies in Hospitals by utilizing all the suggestions and recommendations compiled during the first phase. This first draft revision should be submitted by the Committee on Minimum Standards to the SOCIETY at the 1960 Annual Meeting and to refer this revision of the Minimum Standard to every affiliated chapter for further study.

The third phase of the long-range revision plan would be undertaken by the 1960-61 Committee on Minimum Standards. This Committee would be responsible for collecting the recommendations of affiliated chapters on this first draft revision of the Minimum Standard. In addition, the views of related organizations should be sought on this matter. All of these recommendations would serve as the basis for this Committee to prepare the second draft revision of the Minimum Standard for Pharmacies in Hospitals and would be submitted to the SOCIETY for approval at the 1961 Annual Meeting. Upon approval by the SOCIETY, these revised standards would be submitted to the proper hospital and related organizations for approval.

This long-range plan will require a number of years to develop a revised standard for hospital pharmacy. But since it involves the Committee process, it is a realistic approach as far as the time element is concerned.

The inherent advantages of such a plan are significant. It will provide an opportunity for hospital pharmacists as well as other interested individuals and organizations from throughout the United States to contribute their ideas, recommendations and desires toward the formulation of an improved Minimum Standard for Pharmacies in Hospitals. It will represent the recommendations of pharmacists from hospitals of different sizes and types. It will take into consideration the various factors involving pharmacy as an integral part of the hospital as an organizational unit. It will provide a Minimum Standard which will be more acceptable to all those who are concerned with coordinating, implementing, and providing hospital pharmaceutical service to patients.

Committee on Minimum Standards: Clifton J. Latiolais, Chairman, William Heller, Richard Henry, Isabel Stauffer.

Report of Committee on Membership and Organization

GEORGE F. ARCHAMBAULT, *Chairman*

The Committee on Membership and Organization for 1957-1958, first reviewed the activities of similar committees for the past five years as reported in the "Green Sheets" by Chairmen Bogash, Shannon, Schneider, Beck, and Rogan.

It was decided that one prong of this two pronged committee should be inactive this year—the organization prong. Walter Frazier, Sub-Chairman of last year's Committee, with responsibility for "organization" had turned in for his Subcommittee such an excellent outline of short and long-range organizational plans, that the Committee felt nothing further should or could be added at this time. The material printed in the "Green Sheets" (ASHP Official Reports) in July-August 1957 (page 475) could be a blueprint on this point for this SOCIETY and its Chapters for the immediate years ahead.

With "organization" disposed of, the Committee turned to its membership responsibilities. By mid-August a three phase long-range membership drive program had been formulated. We will be the first to admit that no phase is unique or new but we do believe that *this* is the proper direction for the SOCIETY to follow and we so recommend. We are quite convinced that the local groups should and must do the actual main drive recruitment down at the grass roots. To this end the program this year has been one mainly of developing sound "tools" and "methodologies" for the "locals" to use.

The three phase program on membership developed this year consists of:

1. A membership mailing to each hospital administrator of the nation concerning his hospital pharmacists;
2. A recruitment brochure; and
3. A detailed recruitment plan for the guidance of all locals.

Mailing to Hospital Administrators

Phase One: This consisted of developing a mailing piece to hospital administrators inviting their hospital pharmacists through them to enjoy the benefits of membership in this SOCIETY.

The Committee worked up the original plan. When actually implemented, each administrator of the 7,000 or so hospitals of this nation will receive (a) membership form, (b) copy of the ASHP Hospital Narcotic Control Suggestions, (c) a letter from the ASHP Secretary, and one from the Secretary of the American Pharmaceutical Association. We feel that this is a task well done. The cost of such an expensive membership drive mailing is being financed jointly by the ASHP and A.Ph.A.

The Recruitment Brochure

Phase Two: Over the years, the SOCIETY has discussed the very real need for a recruitment brochure—something that could be made available to local chapters in their recruitment programs and also, serve as an excellent membership drive media at conventions where the ASHP booth is on display such as at the A.H.A., and C.H.A. Conventions. A four-page, 4¼x5½ brochure was developed and completed by your Membership Committee this year. This brochure was turned over to the Secretary of the SOCIETY in March for approval of the Executive Committee. We hope to have it available for the June Institutes, but certainly no later than this fall for use by the local chapters in their membership drives.

A Tested, Detailed Recruitment Plan For Chapter Use

Phase Three: The Committee gave study in this area to finding a plan that the chapters could install and use year after year with good results. We found our base plan in successful operation in New Jersey by the New Jersey Society of Hospital Pharmacists.

The Plan is as follows: The New Jersey Chapter in 1957 compiled a roster (printed and distributed through the courtesy of Hoffmann-La Roche) of all hospital pharmacists in the state whose hospitals participated in the Society's survey of hospital pharmacists.

Essentially, the plan calls for an annual early fall letter being mailed to each hospital in the state by the Secretary of the Chapter. The A.H.A.'s Hospital Administrator's Guide Issue of *Hospitals* can be used as address source material.

The letter seeks the following information:

1. Names of all pharmacists currently employed full or part-time by the hospital;
2. Telephone number of the hospital; and
3. Name and address of hospital.

A returned postal card form can be developed for the reply to facilitiate cooperation of the administrator and/or pharmacist. The letter in effect tells the administrator that this is the annual roll call of hospital pharmacists in the state for publication in the annual state roster, a copy of which will be mailed to his hospital when completed in thanks for his cooperation.

The Society's Secretary then lists the returns alphabetically by hospitals. For Example,

All Saints Hospital, 56 St. John's Street, Trenton, New Jersey

John H. Roe, Chief Pharmacist
Alice M. Doe, Staff Pharmacist

An alphabetical list of hospital pharmacists, name of pharmacist and hospital affiliation, is also developed.

The two lists are then mimeographed, placed into a simple attractive binder, labeled "New Jersey Hospital Pharmacists 1957," and distributed to all participating hospitals.

The Secretary then checks the Society's membership list with the roster list. Those not members are thus spotted and the local membership committee or committees start their work by late December or early January. Telephone and personal contact by members of *all* non-members does the trick.

*SECRETARY'S NOTE: This is presently being coordinated through the Office of the Division of Hospital Pharmacy and will be in the mail in the near future.

To your Committee, this is an effective local approach and we bring this plan to you in the sincere belief that we have uncovered a simple, easy membership tool for each local to implement each year. It requires the enthusiasm and follow-through of but one person, the Secretary or Chairman of the local membership committee.

An annual fall drive of this type would give *each* chapter its potential membership number by name and location. We hope you will take the plan home and try it.

Membership Statistics

In conclusion, statistics given to this Committee on March 15, 1958, were as follows:

Total number of members	2,762
Active	2,277
Associate	484
Honorary	—
Life	1

With total membership noted in last year's report (for March 15, 1957) at 2,557 (active 2,149, associate 405, honorary 2, life 1), this represents a net gain of 280 members. During the year, 205 members were dropped. The normal attrition rate estimated at 6 percent for hospital pharmacy would be 154. Some 51 individuals then, if our estimates are correct, are still in practice and have not renewed their membership. Obviously the *new* members joining this past year run well over 400—a good year to say the least. But not good enough when we note that there are approximately 5,000 full-time hospital pharmacists and 1,000 part-time hospital pharmacists on duty in the country today, and our total active membership, (not including associate members), numbers only 2,277. It would appear that our membership growth field remains unfortunately fertile ground to the extent of some 2,700 full-time hospital pharmacists, and 1,000 part-time individuals.

Recommendation

We have but one recommendation to offer:

Membership Recruitment

WHEREAS it is essential for the life and well being of any professional *society* that there by an *active* and *continuous* interest in the recruitment of members, especially those practitioners new to the specialty or the area covered by the local chapter, and

WHEREAS the 1957-58 Membership and Organization Committee has developed a three pronged methodology for an annual national and local membership drive,

BE IT RESOLVED that the AMERICAN SOCIETY OF HOSPITAL PHARMACISTS furnish to each Chapter annually, each fall, a supply of recruitment brochures, and be it further

RESOLVED that with the transmittal of such brochures a copy of the "New Jersey Membership Recruitment Plan" as modified by this report be included with a letter from the Secretary, encouraging the adoption of this technique at the Chapter level, and be it further

RESOLVED that periodically, but at least once every three years, a national recruitment mailing to hospital administrators be undertaken, including with such mailing, a current important number of the JOURNAL or special study report of special interest to hospital administrators.

Appreciation

In conclusion, I would be remiss indeed if I did not thank the members of this Committee who aided me in my work —Allen V. R. Beck, Robert Bogash, Carl Dell, James McKinley, Nelly Negro, Jane Rogan, Sister Mary Angeline, and Vernon Trygstad.

Committee on Membership and Organization: George F. Archambault, Chairman, Allen V.R. Beck, Robert Bogash, Carl Dell, James McKinley, Nelly Negro, Jane Rogan, Sister Mary Angeline, and Vernon Trygstad.

Report of Committee on Program and Public Relations

WALTER M. FRAZIER, *Chairman*

The Committee on Program and Public Relations has been concerned with three phases of activity during the past year. These included the following: (1) Program for Annual Meeting; (2) Suggestions and Theme for Institutes sponsored by the American Hospital Association in cooperation with the A.Ph.A. and ASHP; and (3) A total public relations program for the SOCIETY. Each member of the Committee has actively participated in planning the programs for the Annual Meeting and the Institutes.

With regard to a public relations program, a series of suggestions was presented to the Executive Committee. However, due to lack of time, these were not considered in detail and will therefore be referred to the new Committee on Program and Public Relations.

We wish to commend the Local Committee of Hospital Pharmacists headed by Mr. Jack Heard, Chairman, Mr. Joseph Beckerman and Mr. Charles Towne, who have so capably coordinated and directed the activities of all of the local hospital pharmacists in the preparations for this Annual Meeting. Many other local members have participated in the good work which is responsible for making this meeting successful and enjoyable. We want to thank Miss Nelly Nigro, Mr. Melvin Schwartz, Mr. George Brangan, Mr. John Plake, Miss Emily Alekna, Mr. R. C. Slanker, Mr. Lewis Grosso, and all of the California hospital pharmacists who will be remembered for special work and fine hospitality.

The Program Chairman wishes to acknowledge the assistance given by members of the ASHP Executive Committee and especially to thank our Secretary, Mrs. Gloria Francke, for the great amount of work which she has contributed to our efforts.

Committee on Program and Public Relations: Walter M. Frazier, Chairman, Herbert L. Flack, Jack Heard, Louis Jeffrey, Russell Lovell, Evlyn Gray Scott, William Tester, and John Webb.

Report of the Committee on Pharmacists in Government Service

CHARLES G. TOWNE, *Chairman*

It is gratifying to report a year of progress marked by close cooperation and understanding between the services. Consolidation of pharmacy's many different interests by organizational liaison has been demonstrated by government pharmacists this year. A Military Section at last year's Convention, a Pharmacy Section at the Military Surgeons Convention and the Military Section at the Pan-American Congress were well attended by the leaders and members of all Federal Services, and reflected unified thinking at the pharmacy level. Close alliance of these groups with hospital pharmacy is assured. Attendance at most of these meet-

ings and participation by the SOCIETY's Committee Chairman made possible the introduction of this Committee's functions and aims, and the offer of our assistance and the SOCIETY's support.

Visits during this year by your Committee Chairman to the larger institutions of most services gave a clearer understanding of the problems in the field, and proved of particular value in conferences and the above meetings.

Generally in most large government hospitals the standards of pharmacy services equal those of the leaders of our field. Some exceptions exist where services are retarded by organizational handicaps, causing substandard practices.

Interservice Transfer of Pharmacists

Action was referred through our liaison member on the Committee on Status of Government Pharmacists requesting interservice transfer of pharmacists from the Army to the Navy. This was also referred directly to armed service members of this Committee. Favorable action will correct a shortage of graduate pharmacists in the Navy, while assigning pharmacists in the Army to professional duties for which they are trained.

Reciprocation for Military Pharmacists

On a suggestion of some members of the Committee a request for reciprocation for military pharmacists was submitted to the Secretary of the National Association of Boards of Pharmacy for consideration of its feasibility.

It has been suggested that "temporary reciprocations" at lower cost be granted military pharmacists assigned to locations where shortages of pharmacists exist. This would enable them to do relief work part-time. It will further be of value in keeping these pharmacists abreast of our field while in the service.

A reply assures it will be referred to their Executive Committee, however, many complications may render this difficult to accomplish.

ASHP Military Membership

A major accomplishment of the year was approval of the Executive Committee to establish a special ASHP military membership, granting a two-year membership to first term enlisted pharmacists or inductees, including a subscription to the JOURNAL, this to be concurrent to their special military membership in the A.Ph.A. This offers pharmacists, while in the service, opportunities to remain abreast of hospital pharmacy, attend local affairs in the area where they are on duty, and to interest them in hospital pharmacy careers after separation.

State Hospitals

A proposed letter to California state hospital pharmacists was presented to the Director of the Division of Hospital Pharmacy and a mailing list was compiled. Action is still pending and may be best taken as a follow-up to the recruitment letter being distributed to all hospitals with the "Suggested Regulations for Handling Narcotics In Hospitals."

Recommendations

1. The importance of this Committee has became manifest as pharmacists in the various government services find their interests go beyond those limited to hospitals, and that hospital problems differ from those of the private institutions. Further, protocol limits public discussion of government problems, which emphasize the value of separate organizations and this Committee; hence, we see military sections in the A.Ph.A., Pharmacy Sections for the Military Surgeons meetings, and other groups organizing. Close alliance of these groups through this Committee is very pertinent. It is recommended the Chairman or a particularly concerned member of this Committee be sent each year to worthy meetings of government pharmacists, with authority to function for the best interests of the SOCIETY and welfare of pharmacy in government hospitals.

2. It is suggested a continuity of the work of this Committee be established by re-appointing a member of the previous year's Committee to Chairman, and the ex-chairman as a member ex-officio whenever possible.

3. It is recommended that the projects incomplete of this year should be continued into the coming term.

Committee on Pharmacists in Government Service: Charles Towne, Chairman, William L. Austin, John G. Beretta, Grover C. Bowles, Allen J. Brands, Jack W. McNamara, Paul Parker, Milton Skolaut, and Arthur Sumliner.

Report of the Committee on Disaster Preparedness

LUDWIG PESA, *Chairman*

Participation of the hospital pharmacist in the medical after-phase of mass casualty will be primarily that of providing critically needed pharmaceuticals.

The Committee has prepared a listing of those medicinal agents which are considered a dispensing responsibility of the pharmacist and known to be necessary to most emergency situations.

Traditional pharmacy with its emphasis on the art of compounding has given way to a more modern concept which recognizes the greater value of the pharmacist who is expert in knowing how and for what purpose drugs should be used. This is the skill which can hasten the availability and enhance the life-saving value of emergency medicine. This is the primary first-aid the hospital pharmacist can give to mass casualty.

The medical management of traumatic injury and associated shock, asphyxia, pain, infection, and anxiety stages is briefly outlined in observance of this broadened aspect of professional pharmacy practice.

Premise for Committee Procedure:

1. Mass casualty medical care planning resolves into distinct levels based on the relative magnitude of the situations.

   Level A. ---- Limited disaster of a local nature.
   Level B. ---- Widespread disaster of nuclear bombing.

The Committee's report is founded mostly on Level A., while reasoning that adequate preparedness planning for local disaster is the responsibility of every hospital, and a sequence to planning for the catastrophe of nuclear bombing which entails large scale formative action under Civil Defense supervision. This greater planning would utilize first-aid stations, improvised emergency hospitals, and established hospitals well outside the blast area.

2. It is a generally accepted fact that the normal hospital pharmacy inventory can suffice for the early casualty needs in community disaster. This is substantiated by a survey of actual disaster experiences and reasonings developed at a Planning Institute which was sponsored by the American Hospital Association in Chicago last summer.

Supplementing this premise is the acumen of the hospital pharmacist who always stocks well ahead on all essential pharmaceuticals.

A pre-planned replenishment program as outlined in previous reports is essential to assuring a constant flow of supplies and is especially necessary in a situation where the hospital receives an overwhelming number of casualties.

3. The basic list of pharmacy supplies was developed on the premise that thermal and mechanical trauma or a combination of such injuries are predominant in mass casualty.

4. The Committee presentation is centered mostly on the initial situations in mass casualty care.

For a practical presentation, some proprietary nomenclature could not be ignored. Where multiple listing of individual drugs of a similar nature would be superfluous, pharmacologic class names were used.

The basic groupings of the list may be supplemented from a more diversified pharmacy inventory to provide greater therapeutically distinct volumes.

Attention is drawn to a recent printing of studies done by Robert C. Bogash entitled "Physical Compatibilities of Some Intravenous Admixtures," and "Physical Compatibilities of Some Intramuscular Admixtures." Time and effort saved in assuredness of admixture procedures are tremendously magnified in value during disaster care.

In presenting a brief outline on medical care to coincide with pharmaceutical needs, some generalized opinions were drawn from the following publications:

"Early Care of Acute Soft Tissue Injuries," published by the Committee on Trauma of the American College of Surgeons.

"An Outline of the Treatment of Fractures . . ." published by the Committee on Trauma of the American College of Surgeons.

"The Merck Manual," Ninth Edition.

"Emergency Medical Treatment," F.C. D.A. Manual TM-11-8.

"Mass Casualties—Principles Involved in Management, *Military Medicine* 118, No. 4 (Apr. 1956).

"Readings in Disaster Planning for Hospitals," published by the American Hospital Association.

"Principles of Disaster Planning for Hospitals," published by the American Hospital Association.

See also "Emergency Medicine Management.*

Committee on Disaster Preparedness: Ludwig Pesa, Chairman, Robert Cathcart, Thomas Foster, Neal Johnston, Milton Skolaut, and Vernon Trygstad.

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*For "Emergency Medicine Management," see following 3 pages.

EMERGENCY MEDICAL MANAGEMENT

Showing Medications which may be Indicated in the Early Management of Mass Casualty

Condition	Medication Indicated
Some Basic Considerations, Principles and Procedures In the Early Management of Mass Casualty.	
Shock	
Shock is expected after extensive crushing injuries, traumatic amputations, major fractures, serious burns, massive hemorrhage, and chest and abdominal trauma. Except after large hemorrhages, the fully developed picture of peripheral collapse associated with a fall in circulating blood volume may not appear for several hours. Primary or neurogenic shock occurs very early in trauma and consists of sudden vasodilation, resulting from pain, fright or anxiety. This type of shock is rarely fatal. Secondary shock basically involves blood volume loss. Diminished blood flow to the tissues results in tissue anoxia, increased organic acids, and acidosis.	
Adequate sedation and pain relief must be given promptly. In most cases a single dose of morphine will be sufficient. Profound shock calls for the intravenous route of administration. Subcutaneous doses may be poorly absorbed. Barbiturates are safer for allaying restlessness and anxiety. Other C.N.S. sedating agents (chlorpromazine and promethazine) have recently been used with success. Stimulants such as pethylenetetrazol. nikethamide or levarterenol may improve the circulation but cannot be relied upon for lasting effect. Digitalis is not indicated. Epinephrine, though listed among the pressor agents, is not favored in shock treatment. It can best serve for acute anaphylactoid reactions. Topically applied, it may check capillary bleeding. Added to solutions of local anesthetics used for infiltration, it increases the duration of the action.	**Pain and Sedation Therapy** **Codeine Phosphate U.S.P.** **hypodermic tablets 30 mg.;** **injection 30 mg./ml.** **Meperidine Hydrochloride U.S.P.** **oral tablets 50 mg.; 100 mg.;** **injection 50 mg./ml.** **Morphine Sulfate U.S.P.** **hypodermic tablets 15 mg.;** **injection 15 mg./ml.** **Amobarbital Sodium U.S.P.** **capsules 200 mg.;** **injection 250 mg.; 500 mg.** **Pentobarbital Sodium U.S.P.** **capsules 100 mg.;** **injection 50 mg./ml.** **Phenobarbital U.S.P.** **tablets 30 mg.;** **injection phenobarbital sodium in propylene glycol 65 mg./ml.** **Secobarbital Sodium U.S.P.** **capsules 100 mg.;** **injection 50 mg./ml.**
Intravenous fluid replacement to restore circulating blood and tissue fluid volume is a paramount measure. Whole blood is the fluid of choice in shock due to mechanical trauma, hemorrhage, or severe burns. **Plasma expanders such as dextran or gelatin solution or even saline can substitute in situations of mass demand. M/6 sodium lactate solutions can serve additionally to combat acidosis. When oral dosage is possible in burn therapy, a solution of sodium chloride and sodium bicarbonate may suffice for electrolyte sustenance.** **Intravenous Dextrose 5%, in addition to supporting circulatory volume, is valuable for its protein-sparing action. Intravenous protein hydrolysate solutions are contraindicated during acidosis and vasodilatory side effects may hinder vasopressor control measures. For moderate injuries with mild shock, treated early, 500 ml. of I.V. fluid usually suffices: Massive injuries, deep shock or injuries treated late may require 1,000 ml. to 2,500 ml. initially.** **Intravenous corticosteroid therapy may be of some value in shock, unresponsive to standard therapy. Intravenous calcium gluconate 10% is often listed among disaster medication supplies. However, its value in hemorrhagic control is doubtful. Its greatest value in early emergency care may be as a source of calcium ion where large volumes of citrated blood have been transfused.**	**Pressor Agents** **Levarterenol Bitartrate U.S.P.** **injection 8 mg./4 ml.** **Phenylephrine Hydrochloride U.S.P.** **injection 10 mg./ml.** **Mephentermine Sulfate U.S.P.** **injection 15 mg./ml.** **Epinephrine Hydrochloride** **injection 1:1000** **Respiratory Stimulants** **Caffeine and Sodium Benzoate U.S.P.** **injection 500 mg./2 ml.** **Nikethamide U.S.P.** **injection 25%** **Pentylenetetrazol U.S.P.** **injection 100 mg./ml.** **Plasma Replacement Therapy** **Normal Human Plasma U.S.P. 500 ml.** **Normal Human Serum Albumin U.S.P. 25%; 50 ml.** **Dextran 6% in Saline 500 ml.** **Gelatin 5% in Saline 500 ml.** **Circulatory Replenishment - Fluid - Nutrient and Electrolytic (500 ml.; 1,000 ml.)** **Balanced Electrolyte Solutions** **Dextrose 5% or 10% in Water U.S.P.** **Dextrose 5% in Saline** **M/6 Sodium Lactate Solution U.S.P.**
Mechanical Trauma **Wounds will be cleansed with soap and water, or a mild detergent (pHisoderm) and copious volumes of normal saline. Pressure bandage, elevation of the extremity involved, or ligation of the blood vessels will usually control visible bleeding. Tourniquet is a last resort.** **In mass care of bleeding patients, absorbable hemostatics (alone or combined with thrombin) may be resorted to. Fibrin foam is rapidly effective and causes negligible local reaction.**	**Supportive Stress Therapy** **Intravenous Hydrocortisone 100 mg.** **Infusion Hydrocortone Concentrate 20 ml.** **Solu-Cortef 2 ml.** **Corticotropin U.S.P. (ACTH)** **injection 40 units per ml.** **Hemostasis** *Local* **Cellulose, Oxidized U.S.P.** **Oxycel** **Hemo-Pak**

Oxidized cellulose which promotes clotting by a reaction between hemoglobin and cellulosic acid should not be used with thrombin. Except for use in immediate control of hemorrhage as a sutured implant or temporary packing, it should not be applied as a surface dressing, since it inhibits epithelization. Local hemostatics may also be in demand during internal surgical procedures.

The use of local antiseptics and antibiotics, in or on the severe wound, is generally not recommended. Possibility of cell sensitivity and consequent retarding of healing presumably supports this prohibition. Locally applied, antiseptics will be utilized principally for superficial injuries, sterilization of skin prior to operating room procedure and later for suppurating wounds.

Benzalkonium chloride is the germicide of choice in Federal Civil Defense planning. All wounds of soft tissue and fractures will be considered as contaminated, and call for the prophylactic administration of chemotherapeutic agents, coupled with immunotherapy.

Antibiotic Therapy

Tetracycline and other antibiotics in the same dosage range, may in disaster conditions, be given orally in doses of 750 mg. every 12 hours. The intravenous use of these same antibiotics necessitates that the hospital pharmacist be ready to proffer advice on compatibility of admixture to adjunct therapy I.V. fluids. The repository intramuscular forms of tetracycline phosphate complex 250 mg. and chloramphenicol 1,000 mg. which need be administered less frequently (every 12 or 24 hours) are to be considered when nursing care may be at a premium.

The bulk of penicillin inventories in hospitals is the repository form. The conventional dose of 300,000 units of procaine penicillin can be doubled in disaster care to extend intervals between injections. Federal Civil Defense Administration storage lists favor the oil base form because it requires no refrigeration, has long potency dating, and provides drawn out maintenance levels. Aqueous suspensions, however, can provide higher peak levels, especially if fortified with crystalline penicillin. In wounds involving extensive tissue necrosis aqueous penicillin G may be favored. Oral penicillin can simplify dosage administration for less serious cases. Million or 500,000 unit tablets of buffered penicillin G and the newly introduced tablets containing the potassium salt of penicillin V can establish suitable blood levels.

Serotherapy

Tetanus prophylaxis calls for 1,500 to 3,000 units hypodermically after negative sensitivity test. Repeat doses after a period of days may be in order. Booster doses of tetanus toxoid may be given to patients actively immunized to tetanus within the preceding four years.

According to a study, which was first reported in the March 1954 issue of the *American Journal of Surgery*, the prophylactic administration of polyvalent gas gangrene antitoxin is no longer recommended. The most reliable prophylaxis, of gas gangrene, the study reports, is early and adequate wound surgery (debridement) with the wound being left open. Several days later when the wound is clean, it may be closed by delayed suture. Your Committee included Pentavalent Gas Gangrene Antitoxin therapeutic dose vial for use as an adjunct measure with antibiotics and sulfonamides for the treatment, should it occur later, of anaerobic infection due to gas forming bacilli.

High in priority for surgical care will be stomach and small bowel wounds requiring exploration and closure. Large bowel wounds will require exteriorizing (colostomy). Open chest wounds may be closed in the early emergency phase with simple occlusive dressings of sterile vaseline gauze. Chest wall pain can be relieved by injecting the intercostal nerves with procaine HCl 1%.

Burn Trauma

It is evident that in mass burn care, standard procedure as established by the institution's therapeutics committee will guide the pharmacist in meeting medication needs. Burns are defined as tissue injuries caused by thermal, electrical, radioactive, or chemical agents. Generally, it may be surmised that the thermal type of burn will predominate in most mass casualty incidents. Skin and sometimes mucosa of the respiratory and alimentary tract are most quickly damaged. Severity of burn injury to the skin can range from superficial damage to progressively deeper penetration (third degree)

Gelatin Absorbable Sponge U.S.P.
Gelfoam
Trombin U.S.P.
Thrombin Topical 10,000 units;
Thrombin 5,000 units

Locally Applied Anti-Infectives

Benzalkonium Chloride U.S.P.
aqueous solution 1:1,000;
tincture 1:1,000 (tinted);
concentrate 10% or 12.5%
Hexachlorophene Liquid Soap U.S.P.
Iodine Tincture U.S.P.
Iodine Modifications
Organomercurial Compounds
Synthetic Phenol Concentrates

Systemic Anti-Infectives

Tetracycline Hydrochloride U.S.P.
capsules 250 mg.;
injection I.M. 100 mg.;
injection I.V. 500 mg.
Tetracycline Phosphate Complex
injection I.M. 250 mg.
Chloramphenicol U.S.P.
capsules 250 mg.;
injection I.M. 1,000 mg.
Erythromycin U.S.P.
capsules, tablets 250 mg.;
injection I.V. 500 mg.
Novobiocin Sodium
capsules 250 mg.
Oral Sulfonamides 0.5 Gm. tablets
Procaine Penicillin G Suspension U.S.P.
injection 300,000 U./ml.
Potassium Penicillin G U.S.P.
injection 1,000,000 U.;
tablets 500,000 U.
Penicillin-Dihydrostreptomycin U.S.P.
injection - for suspension
Benzathine Penicillin G Suspension U.S.P.
injection 600,000 U./ml.

Tetanus Prophylaxis

Tetanus Antitoxin U.S.P.
injection 1,500 units
Tetanus Toxoid U.S.P.
injection

Gas Gangrene Therapy

Gas Gangrene Antitoxin, Pentavalent N.F.
injection, therapeutic dose

Antibiotic Bowel Therapy

Neomycin Sulfate U.S.P.
oral tablets 0.5 Gm.;
sterile powder 0.5 Gm.

Shock Therapy Drugs

Consult previous list

Oral Electrolyte Replacement

Oral aqueous solution
Sodium Bicarbonate 0.15%;
Sodium Chloride 0.3%

where sensory nerve endings are destroyed. These third degree burns if extensive will heal only with skin grafting. Thrombin U.S.P. is a valuable agent for the fixation of skin transplants. The immediate problem in severe burns is the management of shock and loss of body fluids. Dilatation of capillaries and small vessels with an increase in capillary permeability, results in plasma loss under the epidermis, producing edema. In addition, there is considerable loss of exudate from the burn surface. Wound treatment is a secondary measure.

Antihistaminic therapy and/or tracheotomy may be necessary for prevention of asphyxia due to edema of the respiratory tract. This emergency is usually associated with third degree facial burns.

Patients with extensive burn areas often require gastrointestinal suction to correct complications resulting from gastric dilatation.

Intensive antibiotic therapy and tetanus prophylaxis are initial measures of great importance. Naso-pharyngeal inhabitants such as streptoccoci and staphyloccoci may predominate in upper body burns while coliform bacteria and clostridia are to be considered in burns of the lower body.

Local Care

The "closed dressing principle" which proved itself in the Cocoanut Grove disaster in 1942 draws heavily upon surgical textile supplies. Sterile vaseline gauze will be called for, or instead, dry dressings in which catheters have been placed for introduction of normal saline. One type of occlusive dressing may utilize a standard layered cellulose-gauze pad to be placed on the burned area without petrolatum or other medication. Pressure is maintained by semi-elastic roller bandage.

In the "exposure method" the patient is placed on surgically clean sheets after cleansing and debridement of the burned area. A covering bed cradle keeps bed clothing from the wound and conserves warmth. This method is considered by some authorities as especially suited for burns of the face, neck, perineum, side of trunk or proximal part of extremity.

Yet another method may employ covering creams, ointments or sprays bearing mild antiseptics, benzocaine, vitamins or a combination of the three.

Enzymatic digestants may be employed to further complement manual debridement. In mass casualty treatment where individual care is limited, a fast and effective enzyme could be life-saving. Two such enzymes, clostridium histolyticum and ficin, a fig tree extract, are at present being evaluated at several Burn Centers.

Antihistamine Therapy

Chlorpheniramine Maleate U.S.P.
injection 10 mg./ml.
Diphenhydramine Hydrochloride U.S.P.
injection 50 mg./ml.
Promethazine Hydrochloride N.F.
injection 25 mg./ml.

Antibiotic Therapy

Consult "systemic anti-infectives"

Tetanus Prophylaxis

Consult previous list (same heading)

Burn Covering

Petrolatum Gauze U.S.P.

Proteolytic Enzymes-Topical

Trypsin, Topical Powder 25 mg. w/Diluent
Streptokinase-Streptodornase with
carboxymethylcellulose jelly
phosphate buffer diluent

Miscellaneous Therapy Needs

Alcohol U.S.P.
Aminophylline U.S.P.
injection I.V. 250, 500 mg.;
injection I.M. 500 mg.
Ammonia Inhalant Solution, Aromatic
0.3 ml.
Atropine Sulfate U.S.P.
injection 0.4 mg./ml.
Boric Acid Ophthalmic Ointment 5%
Calcium Gluconate U.S.P.
injection 10%, 10 ml.
Digitoxin U.S.P.
injection 0.2 mg./ml.
Lubricant Jelly, Sterile
Petrolatum Gauze U.S.P.
Procaine Hydrochloride U.S.P.
injection 1%, 2% plain and with
epinephrine
Scopolamine Hydrobromide U.S.P.
injection 0.4 mg./ml.
Sodium Chloride for Injection U.S.P. 30 ml.
Sodium Chloride Isotonic Solution
Sterile U.S.P. irrigating solution
1,000 ml.
Water for Injection U.S.P. 30 ml.
Thiopental Sodium U.S.P.
injection I.V. 1.0 Gm. (for short time
anesthesia)

Report of the Committee on Economic and Household Poisons

CLARA HENRY, *Chairman*

The prime objective for this Committee's work for the year has been to increase the education of the members of the AMERICAN SOCIETY OF HOSPITAL PHARMACISTS, and through them the public, in problems of accidental poisonings and the activity of the poison control centers.

With this theme in mind, the Chairman is both reluctant and happy to report our progress. From my information, activity in this phase of public health is less than it should be. Questionnaires with addressed return cards were sent to each affiliated chapter asking for details on programs given or planned during the period following the New York meeting in 1957. Only 14 replies were received with less than half reporting any activity, past or future, on the subject of poisonings.

I would remind all of us that contributing to the education of the public on the subject of "Poisonings" is not a project which can be taken up or put down at will, nor is it a title to be pulled out of the bag as a possible subject for a talk. It is a serious program in which every individual, and particularly every pharmacist, is deeply involved and morally obligated to take part so long as children need protection and care. In the final analysis, information on this subject should and usually does come from us. Therefore, the educational program in poison control should receive its right and proper contribution of effort, research and action from every pharmacist, particularly every hospital pharmacist in the country.

On the positive side, there is much encouragement. Though from only a few sources, the wealth of material, ideas and imaginative efforts is most gratifying. No one can measure the good resulting from the activities of the Philadelphia Association of Hospital Pharmacists, the Delaware Poison Information Service, the Illinois, North Carolina, Northeastern New York and Oklahoma Societies, and the groups in Arizona, Florida, Oregon and Washington.

Activities in Local Areas

Beginning in the Northwest, my first report will be on the excellent bibliography which the students in the senior class of the College of Pharmacy at the University of Washington have compiled, Under the guidance of Dr. Elmer Plein, these young people organized themselves into groups and arranged the work into three categories. Headed by their Chairman, Rich Brandt, they searched for articles on poisons and poisonings in the following publications:

1. *Journal of the American Medical Association* from 1950 through 1957.
2. *Chemical Abstracts* for the same. period.
3. Miscellaneous publications, including Canadian, British and American medical, hospital and industrial journals.

Category Number 1 has been transferred from the library cards used for the file to manuscript which makes it easier to reproduce. These will be distributed, as will the other two categories, just as soon as completed.

In 1956 as a gift to the children of the City of Seattle, the first Poison Control Center in the state of Washington was established at Orthopedic Hospital. In the first nine months of operation, 745 calls were received, of which 236 were from physicians, a few from pharmacists and the balance from parents. Although they are encouraged to call their own physician first, parents may call the Center and be told what to do both as to first aid and where to take the child. Sometimes it has been possible to reassure a frantic parent that the substance ingested is not lethal. In spite of the national average of one fatality in every 100 calls, there were no fatalities in the Seattle group during this period.

One particularly fine phase of this program is the follow-up. Every call, serious or not, is checked by a visiting nurse who not only sees the patient but is able to observe environment in the light of possible causes for accidents, to instruct parents in home safety measures, and after a second check, visit and write the entire story of the incident.

Recently at St. Peters' Hospital in Olympia, Washington, a new Poison Control Center was opened. With the pharmacist, Dean Ketterman, and members of the Thurston-Mason County Medical Society listing information on poisons and their antidotes, the Center has become the project of various organizations. The telephone bills are paid by the Women's Auxiliary of the hospital; and a good portion of operating funds come from parents of children who have suffered a poisoning accident.

Deaconess Hospital in Spokane, Washington has also an established Poison Control Center but I have no information on its activity.

At the Institute on Hospital Pharmacy held in Seattle last June, Dr. Plein monitored a panel discussion on "Poisons and Their Control." He drew attention to his talk through a label from an insecticide "Zerodane," a preparation contining 44 percent chlordane. On a label measuring 5" x 9" the "Caution and Antidote" information was in very fine print in an area of ¾" x 5/8". Labels will come into discussion again in this report.

The State of Oregon Poison Control Registry is an organization composed of the State Medical Society, State Board of Health, University of Oregon Medical School, Oregon Association of Hospitals, Oregon Branch of the American Pharmaceutical Association, and the City of Portland Bureau of Health. For quicker and better function, the entire membership is divided into committees and subcommittees whose main duties are:

"To review and decide on minimum equipment and reference texts necessary for each participating hospital; a training program for staff and nursing personnel in treatment of poison cases; to plan and deliver educational programs on the subject; and finally to collect 'follow-up' information as well as the outcome."

The Registry acquired the Florida Card File of over 6,000 toxic agents and they are continuously adding to it. Telephone stickers bearing the number of the control center have been sent to every physician in Oregon. Physicians outside the city of Portland are encouraged to call and receive help in establishing a participating center in their locality. The center is manned on a 24-hour basis by second-year residents in pediatrics who have become well informed as to all procedures when called upon for information.

Everyone works at "Poison Control" in the Oregon System; and while the Consultation Center is located in Doernbecher Hospital in Portland, all hospitals in the state may become participating hospitals if they fulfill the necessary requirements. These are: participating hospitals must maintain minimum equipment, antidotes, personnel, and treatment aids for acute intoxication; they must appoint a staff member to be responsible for every phase of the poison control program; they must keep all case records complete and forward them periodically to the Center for evaluation; and they must maintain a training program for their staff to assure acceptable care of cases of acute intoxication.

The Oregon Registry has gone on record as supporting fully the Uniform Chemical Label Law written by the American Medical Association's Committee on Toxicology and reported by Dr. Bernard Conley in the *J. Am. Pharm. Assoc. 18*:543 (Sept.) 1957.

The San Francisco Bay Area in California has a Poison Control System with 13 hospitals in the nine Bay Area counties participating, plus a 24-hour information service to physicians maintained by the Alameda Blood Bank. To augment the poison control interest and to speed up the educational programs to the public, women's auxiliaries of each hospital and of the Northern California Pharmaceutical Association have been enlisted in the program. Several antidote cabinets and texts on toxicology have been placed in some hospitals. Pediatricians enclose a "poison pamphlet" with each statement sent. The pamphlet is changed about four times yearly but each dealing with one of the common home accidents. Lectures are given by various groups and television and radio have been utilized to furnish necessary information.

In Arizona, the College of Pharmacy, University of Arizona, is the source of information for all hospitals in the state. Working under the direction of Dr. Albert Picchioni and Dean Willis Brewer, the students implement the poison information cards. Some of the information was acquired from the University of Florida but much has been the result of research at the Arizona College of Pharmacy with the help of the Botany Department. For example, a study has been made of some of the ornamental plants growing in that state, particularly those which have been factors in the poisonings suffered by children. The results of these studies have become part of the Master File at the Center. The file cards operate as follows:

A set of white cards lists proprietary, household, and economic poisons with their active ingredients.

A set of yellow cards contains:

1. Generic name of poisons. (Trade names are cross-indexed on another set of yellow cards referring the reader to the generic name card for information.)
2. Common sources of the poison.
3. Degree of Toxicity.
4. Signs and Symptoms.
5. Treatment.

Each card must pass an advisory committee consisting of four physicians, three pediatricians, one surgeon, two pharmacologists, and one pharmacognocist. When this is done, the cards are copied (Thermofax Duplicator) and one copy of each is sent to every hospital of 100 beds or over in the state.

The Poison Control Center reports that from 1957 through the balance of the year, 272 cases were reported. Of this number 74 percent involved children under five years; and the biggest single cause of this type of accident was aspirin—27 percent. Fatal outcome was 1.6 percent. In the period between December 1, 1957 and February 1, 1958, with 39 reported cases, there were no fatalities. For children under five years, this figure dropped to 71 percent for the same period. However, aspirin as a cause, jumped to 36.3 percent.

In Oklahoma, the University Poison Control group is making a specific study of

poisonous mushrooms indigenous to that state. The Director of the Poison Control Center, Dr. H. A. Shoemaker, has an excellent paper on the subject originally published in the *Journal of Oklahoma State Medical Association* (June) 1954. Additionally in Volume 20, Number 2 of the August 1957 issue of *Postgraduate Medicine*, the same author has an article on one phase of accidental poisoning which sometimes escapes our attention, namely that of "Untoward Reactions to Antibiotics." It is interesting that from 100 to 200 cases of anaphylactoid shock due to penicillin are reported annually and the fatality rate is a high 37 percent.

Dr. Shoemaker's booklet, entitled "Emergency Treatment of Some Acute Poisonings," is in use as a reference at the Oklahoma Poison Control Center. Well worth copying is Dr. Shoemaker's concise list of equipment and drugs for the emergency room. Other references used include: *Clinical Toxicology of Commerical Products*, by Gleason, Gosselin and Hodge; *Handbook of Poisons*, by Dreisbach; *Accidental Poisoning in Childhood*, by Press; and *Poisonings*, by Von Oettingen.

Sister Teresa reports that Dr. Shoemaker addressed the Oklahoma Society of Hospital Pharmacists on the ever important subject of Poison Control and the place of the hospital pharmacist in the program.

In the Chicago and Evanston areas, we are pleased to report that Mr. Charles Lev is continuing his speaking engagements before Service Clubs, Parent Teachers Associations, etc. Also, Mr. Ed Hartshorn tells me that their chapter has again appointed Mr. Lev to head the Toxocological Committee for another year. In Chicago, there are control centers at six hospitals under the direction of two physicians in all except one instance. This exception is at Presbyterian-St. Luke's where the Chief Pharmacist, Louis Gdalman, and one physician, direct the activities of the poison control center. The Illinois Society has had several programs with "Poisonings" as the theme; this continued interest is important.

From an item in *Drug Topics*, we learn that the Louisiana Pharmaceutical Association, as a part of a memorial to Dean John McClosky, has set up Poison Control Centers. They recently donated antidote cabinets and toxicology texts to the St. Francis Cabrini Hospital and to Charity Hospital.

One interesting meeting of the Georgia Society of Hospital Pharmacists was devoted to the problems of accidental poisonings. Dr. Charles Hartman of the University of Georgia spoke on Poison Control in its most important aspects, and Dr. Douglas Johnson of Southern College of Pharmacy reviewed important works on toxicology which should be the nucleus of a poison control reference library.

The Houston Area Society is working with the pediatricians of that community in establishing a Poison Information Center. One associate member of the Society is on the Committee.

The University of Florida School of Pharmacy was the first to become a Poison Information Center for the hospitals of the state. Their card index of over 6,000 items has been purchased by Arizona, New Hampshire, and other groups which have profited from this work.

A very fine study, entitled "Signs, Symptoms and Treatment of Certain Acute Intoxication," written in 1955 for the Pharmacy and Therapeutics Committee of Jackson Memorial Hospital of Miami by Dr. William Deichman, has already gone into its third printing. I am indebted to Carl M. Dell, Director of Pharmacies at Jackson Memorial, for a copy of this work.

In North Carolina, the work begun by James Michener continues. He and Claude Paoloni have made several talks during the past year. I think we can justly state that the growth in the past year of speakers' groups can be traced to Mr. Michener's original talk which has been used as a pattern by many.

The State Bureau of Public Health of New Hampshire gave $10,000.00 for the Poison Control Center recently opened in Mary Hitchcock Memorial Hospital with Dr. Robert Gosselin as Director. (Dr. Gosselin is co-author with Gleason and Hodge of *Clinical Toxicology of Commerical Products*). The group is making an educational movie with the famed puppeteer, Basil Milosvoroff, adapting his puppets to an animated color movie. Intended for school children, scout meetings, P.T.A., etc., it will be an excellent means of bringing to those most vitally concerned—the children and parents—information on to how to avoid home poisoning accidents.

Those of you who have been wise enough to subscribe to *The Bulletin of the Northeastern New York Society of Hospital Pharmacists* will know of the very fine survey that group made of the poisoning cases admitted to hospitals represented by their membership. With thirteen participating hospitals representing more than 4,000 beds, this survey not only assembled statistics on age of patients, kind of toxic substance ingested treatment and outcome, but also expressed the policy of each hospital in stocking and checking the emergency room antidotes and equipment. I shall repeat an earlier statement and state that "the work of the Northeastern New York Society of Hospital Pharmacists is a fine contribution to the Poison Control Program and one that could, with credit, be used by other affiliates to step up their own activity along this line."

Delaware Poison Information Service utilizes the activities and contributions of "Industry, Physician, Hospital Pharmacist, Retail Pharmacist, Hospitals and Board of Health." It is the only Center to my knowledge in which all requests for information go officially to a Pharmacy. The phone number of the Center is that of the phone in the office of Mr. Robert Cathcart, Chief Pharmacist at Delaware Hospital in Wilmington. All appeals from the public and from physicians are answered by Mr. Cathcart and his staff. At night a medical resident takes the calls. The lay person's call is answered with instructions on what to do as to first aid and the location of the nearest emergency room where the child may be taken. Calls from physicians request information on ingredients, degree of toxicity, and suggested treatment as set down by an accepted authority.

Mr. Robert Simons has designed, and a display firm has implemented, the exhibit which won for him first prize in the hospitals and clinics division of Pharmacy Week Awards. On display in the window of a department store in Upper Darby where the Optimist Club began a poison control program with the inspiration and assistance of the Speakers' Bureau of the Philadelphia Association of Hospital Pharmacists, this striking and beautiful display won a "Good Neighbor" citation from Upper Darby to Joseph Desiderio, Chief Pharmacist at Delaware County Hospital. It has also been shown at a joint meeting of the hospital associations of Maryland, Delaware and District of Columbia, as well as other medical and public health conferences.

Every parent in Greater Philadelphia and environs must certainly bless the Speakers' Bureau which not only gives talks on the prevention of accidental poisoning in the home, but hands out telephone stickers bearing the control center number, distributes pamphlets on home safety and reminders of the constant care which must be given in order that the natural inquisitiveness of children has no tragic results.

An excellent example of good public relations and genuine service, the letter written by Mr. Herbert Flack to the Community Organizations telling of the Speakers' Bureau is a prize, as is also their stationery which bears the legend "Prevent Accidental Poisonings in the Home." My most heartfelt wish is that every member of this organization could be infected with the virus of enthusiasm, industry and imagination which is so contagious in that Philadelphia-Delaware group.

The Future

Now that the report of what has been or what is being done has been given, what of the future? First of all, I wish to ask forgiveness if some group has been overlooked. As stated before, the reports to me have not been many, so it is possible that some fine work has been done and yet not reported. In the face of the optimistic reports just given, we must not indulge in too much optimism and feel that now we can sort of let up for awhile. There must be a greatly stepped-up program if we are to make our proper contribution to the overall effort concerning this major health hazard. Our educational efforts must be doubled, redoubled, and then multiplied by hundreds if we are to reach places where information is needed. One of my Committtee members reports that in his area many pharmacists with whom he has discussed the problem of poisonings just seem bewildered and need to be told or shown what to do.

One example of lack of information is reported in "Occupational Health News-Letter" from the Department of Public Health and Preventive Medicine, School of Medicine, University of Washington:

"Junior High General Science Students Study Cleaning Efficiency and Evaporation Rate of Carbon Tetrachloride, But Receive Little or No Warning as to Vapor Toxicity."

To condense, a 13 year old boy, in his General Science class, studied the evaporation rate, cleaning efficiency, flammability of carbon tetrachloride, and concluded that it was the best of all tested. The carbon tetrachloride was poured from a gallon bottle into open beakers, samples of fabric were immersed in it, and then hung up to dry in the room where the students were working. The boy's father, who at his job with the water department of the City of Seattle, had listened to lectures on the dangerous properties of carbon tetrachloride, consulted the safety director of his job. An investigation was immediately begun and the science teacher was consulted. His reply was that he was following the text outline. It was found that this type of experiment is common and considered safe because carbon tetrachloride does not burn. Informed of the situation, the school administration took the following immediate corrective steps:

1. Notified the publishers of their failure to include the proper type of warnings in the texts.
2. Sent each science teacher a warning bulletin.
3. Arranged to cover the subject in direct conferences of teachers.
4. Decided to make marginal notations in existing texts if necessary.

Here is one place, in school, where we should be especially alert. No doubt other dangerous situations are being created through lack of information. If we step up our own activity in talking about poisons whenever and wherever we can, these rarely heard but vitally important incidents may come to light.

Another place where we should send the beam of inquiry and sane advice is

the missile fuel chemical items which young persons are seeking for their experimentation. Mr. Floyd Heffron, Secretary of the California Board of Pharmacy, has issued a warning about the sale of such items to those under 18 years of age unless accompanied by their parents. Although potential rocket fuel chemicals, unless specifically poisonous themselves, are not controlled by law, pharmacists should be very cautious about their sale and should issue ample warnings and cautions as to their potential dangers.

In my report last year, it is stated that a closure company had been consulted about designing and implementing a safety cap for containers of household items, including drugs, so that little fingers could not easily get into forbidden substances. After a period of waiting, we were told that it was not feasible at this time. However, a member of the Los Angeles Police Department, Safety Squad, Sergeant Louis Belle, has done what the designing engineers failed to do, designed a safety closure. A firm in Chicago has accepted his creation and will market it to the drug trade in the near future. Thank you, Sergeant Belle.

The Chairman of the Committee on Pharmacy and Pharmaceuticals, Dr. William Heller, requested that the Committee on Economic and Household Poisons accept the task of revising and rewriting the chapter on Poisons and Their Antidotes in the *American Hospital Formulary*. Because it seemed a MUST for us, we began to dig. When it seemed we were about to be overwhelmed, the State of California Board of Pharmacy came to our rescue with the release of their revised pamphlet, "*Official Antidotes, First Aid Treatments, and Label Requirements*. Obtaining permission for its use in part or entire, we sent it to Dr. Heller with some suggestions by Drs. Plein and Picchioni as to a few amendments. This pamphlet is an excellent quick reference and can be obtained for fifty cents from the California Board of Pharmacy.

A brochure containing excellent information on insecticides, including many new formulations can be obtained from: Technical Development Laboratories, Technology Branch, Communicable Disease Center, Public Health Service, U. S. Department of Health, Education, and Welfare, P. O. Box 769, Savannah, Ga. In this brochure, "Clinical Memoranda On Economic Poisons," titles are alphabetically arranged and a portion is devoted to chemical nature, formulations, and uses of the compound. Another section includes medical considerations of mode of action, diagnosis, and treatment. I suggest that each of you write for this brochure.

The A.M.A. Model Chemical Labeling Law, drafted by the Committee on Toxicology, would, if adopted, permit uniform legislation for the labeling of hazardous substances in commercial household and industrial chemical products. The law would require:

1. Labeling of all (at present) unregulated chemical products containing hazardous substances.

2. Identification and warnings for strongly sensitizing chemicals which cause allergic or inflammatory reactions on contact.

3. Same labeling standards for chemicals for export as for those for domestic consumption.

4. Prohibit re-use of food and drug containers bearing their original labels.

The law is intended as a guide for writing regulations for products as to: 1. ingredients, 2. directions for safe use, 3. possible dangers, and 4. first aid instructions.

Products to be included under the law include: 1. auto care and repair materials, 2. paints and paint removers, 3. household cleaners and polishes, 4. heating and cooking fuels, 5. laundering items, 6. soldering fluids, 7. art supplies, 8. toys containing chemicals, and 9. putty.

According to Dr. Bernard Conley, laws controlling the labeling of household chemicals are needed in every state except New York.

Suggestions for Increasing Interest in the Problems of Poisonings

1. Because the impact will be invaluable, we suggest that during National Pharmacy Week, the subject of the displays of the hospital pharmacists could very profitably be "Accidental Poisoning." We further suggest that the Committee on Economic and Household Poisons seek to make available sample exhibits or proposed basic designs or background screens.

2. In order that the full potentialities of this Committee be realized, and in order that the ever-increasing load of correspondence be properly handled, and in order to provide seriously needed education via pamphlets and bulletins for those who request help on poisoning problems or program ideas, we strongly suggest serious consideration of ways and means to provide secretarial help for the Chairman.

3. Because the aims and activity of the Committee on Economic and Household Poisons are of prime importance in—

2) Service in the field of public health;

b) Good public relations; and

c) Education and the dispensing of information,

we suggest that each affiliated chapter appoint an active Poison Committee of its own to work closely with the national Committee. It is further suggested that at least one meeting each year be devoted entirely to "Accidental Poisoning and Its Control."

Recommendations

The following recommendations are presented in the form of resolutions:

1. WHEREAS the work of the Committee on Economic and Household Poisons is increasing considerably, and

WHEREAS real progress is hindered by the necessary period of adjustment of newly appointed members although new ideas by means of new members is much to be desired, be it hereby

RESOLVED that a more permanent and efficient committee be implemented by keeping half of the present Committee for another year, appointing the other half for a two year term. And be it

FURTHER RESOLVED that additional means for implementing a "better" committee be studied.

2. WHEREAS the natural sequence would seem to be that the revision of the chapter on "Poisons and Their Antidotes" in the *American Hospital Formulary Service* be in the hands of those making a specific study of poisons, be it hereby

RESOLVED that the ASHP Committee on Economic and Household Poisons accept the duty and privilege of such a revision if and when necessary.

3. WHEREAS better laws for the control of poisonous items sold from outlets other than pharmacies are necessary, and

WHEREAS better laws for the labeling of hazardous substances are imperative, be it hereby

RESOLVED that the ASHP Committee on Laws, Regulations, and Legislation work closely with the A.M.A. Committee on Toxicology in furthering such legislation; and be it further

RESOLVED that the ASHP Committee on Safety Practices and Procedures work with both groups to assure additional safety.

Poison Antidote Kit

from

Emergency Treatment of Some Acute Poisonings

by

H. A. SHOEMAKER, Ph.D.
Professor of Pharmacology
University of Oklahoma
School of Medicine

Equipment

Stomach tubes: 22 Fr., 28 or 30 Fr., Levine Tube
Mouth Gag
Tongue Forceps
Tongue Depressor Blades
Rebreathing Tube (Airway)
Hypodermic Syringes: 2 ml.; 5 ml.; 10 ml.; 20 ml.; 50 ml.
Hypodermic Needles
Irrigation Syringe

Drugs

Alcohol 70%
Amyl Nitrite Perles
Atropine Sulfate, Hypodermic Tablets, 0.5 mg. and 1.0 mg.
Caffeine Sodium Benzoate Ampuls 0.5 Gm.
Calcium Gluconate Injection Ampuls 10%, 1 Gm.
Chloroform
Dimercaprol Injection (BAL in Oil) 10%, 4.5 ml.
Distilled Water, Sterile, in Ampuls
Epinephrine Ampuls (1:1,000) 1 ml.
Lime Water
Methylene Blue Ampuls, 50 ml. 1% in 1.8 Sodium Sulfate
Metrazol, 10%, 1 ml. Ampuls
Milk (Condensed in cans)
Milk of Magnesia
Mineral Oil
Morphine Sulfate Injection, 15 mg., 1 ml.
Nalorphine Hydrochloride Injection 2 ml. ampuls 5 mg./ml.
Olive Oil
Pentobarbital Sodium Ampuls, 0.5 Gm.
Potassium Permanganate Solution 1% (to be diluted 50 to 100 times before use.)
Sodium Bicarbonate
Sodium Nitrite, 3% Ampuls 10 ml.
Sodium Sulfate, 50% solution
Sodium Thiosulfate, 25% Ampuls, 50 ml.
Starch
Thiopental Sodium Ampuls, 1 Gm.
Vinegar

Appreciation

Appreciation is expressed:

To those chapters which have made "Poisonings" the theme of many of their programs thereby aiding considerably the campaign to put a stop to such home accidents—Arizona, Florida, Georgia, Illinois, Oklahoma, North Carolina, Northeastern New York, and the Philadelphia-Delaware group—high praise and gratitude.

To the senior students of the College of Pharmacy, University of Washington for the excellent compilation of "Poisoning" articles from medical, pharmaceutical, chemical and industrial literature, we are deeply indebted.

To E. R. Squibb and Co. through their Oakland and Los Angeles representatives, and to the Metropolitan Life Insurance Company, our sincere thanks for the safety pamphlets for "hand out" information.

To Dr. H. A. Shoemaker of the University of Oklahoma for granting us permission to reproduce and distribute his concise list of equipment and drugs for use in the emergency room, our appreciation and thanks.

To Dr. George Bates and to Dr. Edith Meyers of the San Francisco Bay Area Poison Control program, again our gratitude.

To Sergeant Louis Belle of the Los Angeles Police Department, for really doing something about this problem of childhood tragedies by inventing his Kiddie Kap, our indebtedness. We wish for him the very best results for his concern and his accomplishment.

To those individuals who have taken the time to send me much needed information and material not otherwise available—in particular to Joseph Desiderio, Theodore Taniguchi, and Herbert Flack—sincere acknowledgement.

To my Committee—each of you must know how deeply indebted your Chairman is to you for the very fine job you performed during the past year.

Committee on Economic and Household Poisons: Clara Henry, Chairman, Emily Alekna, Edward Croumey, Robert Kubiak, Elmer Plein, Albert Picchioni, Lillian Price, Robert Simons, and Sister Teresa.

Report of the Committee on Historical Records

ALEX BERMAN, *Chairman*

The Committee is happy to report that a brochure dealing with bibliographical aids in writing history of pharmacy has been completed by the American Institute of the History of Pharmacy in cooperation with the Committee on Historical Records. This brochure will be distributed at this meeting and will be available at the Institute's office in Madison, Wisconsin.

Renewed support of the Society and Lederle Laboratories has helped the Chairman in his work on the history of hospital formularies, and in the preparation of a slide-talk on "Representative Hospital Formularies of the 18th and 19th Centuries." A preview of this slide-talk will be presented at the joint session of the Section on Historical Pharmacy and the American Institute of the History of Pharmacy on Thursday afternoon, April 24. It is expected that this talk will soon be made available to hospital pharmacy and related groups by the American Institute of the History of Pharmacy.

Now deposited in the Society's archives are some of Dean Spease's papers kindly donated by Mrs. Spease. In addition, Mrs. Spease has also presented to the Society two watches which formerly belonged to her husband. Preliminary negotations have been initiated to secure significant papers of Harvey A. K. Whitney, and it is hoped that these will be presented to the Society in due time.

The Committee would like to acknowledge the splendid contribution of the Houston Area Society of Hospital Pharmacists of a large work entitled, "A Compilation of History and General Information of Hospitals and Hospital Pharmacies in Houston, Texas, and Vicinity." This profusely illustrated typescript was presented to the parent Society at the Annual Meeting in New York City in 1957.

An interesting paper "History of the Texas Hospital Pharmacy Seminar 1949-1956," by F. V. Lofgren, Louise Pope, and Adela Schneider has been presented to this Committee and will be deposited in the archives.

In conclusion, the Committee would like to urge and encourage hospital pharmacists to become members of the American Institute of the History of Pharmacy—an organization which has always given the Society full cooperation and support.

Committee on Historical Records: Alex Berman, Chairman, Albert Lauve, Thomas Reamer, Sister Mary John, and Robert Stockhaus.

Report of the Committee on International Hospital Pharmacy Activities

DON E. FRANCKE, *Chairman*

Of special interest in this year's report are the general plans for the F.I.P. meeting to be held in Brussels in September, 1958, and the proposed student exchange program which has been approved by the ASHP Executive Committee. Statements concerning the Pan-American Congress of Pharmacy and Biochemistry, and the meeting of the F.I.P. Council in Yugoslavia are presented as a matter of record.

This report contains no specific recommendations for action by the Society at this time.

Pan-American Congress

A report on the Hospital Pharmacy Section of the Pan-American Congress of Pharmacy and Biochemistry which was held in Washington, D.C., November 3 to 9, 1957 was published in the American Journal of Hospital Pharmacy *15*:66 (Jan.) 1958. Mr. Grover C. Bowles, Jr. served as Secretary of the Section and arranged a program comprising 17 papers. The Fourth Pan-American Congress was a unique opportunity for all who participated, and hospital pharmacists in the U. S. as well as those in foreign countries appreciated the fine manner in which the Congress was organized.

The Fifth Pan-American Congress of Pharmacy and Biochemistry will be held in Chile in 1960.

F.I.P. Meeting, Brussels 1958

The General Assembly of the Federation Internationale Pharmaceutique will meet in Brussels, Belgium, September 8 to 15, 1958. This meeting will be held in conjunction with the 18th International Congress of Pharmaceutical Sciences. Of general interest to those who may plan to attend this meeting is the International Exposition which is being held in Belgium during 1958.

The Section of Hospital Pharmacists of the F.I.P. will hold meetings under the presidency of Dr. Jean Cheymol of France. The theme for the meeting will be the legal responsibility of hospital pharmacists with reference to safety practices in dispensing drugs to patients in such a manner as to avoid accidents and medication errors. In addition, other papers, reports and discussions on topics of current interest to hospital pharmacists will be held. Mr. Herbert Grainger, Chief Pharmacist at Westminster Hospital, London, England, is Secretary of the Section and in charge of program arrangements. Other officers of the Section of Hospital Pharmacists include the Vice Presidents Dr. H. Lehman of Switzerland and Dr. Don E. Francke of the United States.

As a member of the Section of Hospital Pharmacists of the F.I.P., the ASHP is entitled to one voting delegate on the Council of the Section. In addition, one other representative of the ASHP may attend meetings of the Council, but does not have the right to vote. The ASHP Executive Committee has referred the appointment of the Society's official delegate to President-Elect Bogash.

Other sections which will meet during the week include the Scientific Section, the Section of Industrial Pharmacists, the Section of Pharmacognocists, the Section of Military Pharmacists, and the Press and Documentation Section. A joint session is being arranged by the Scientific Section and the Press and Documentation Section to discuss a plan for the preparation and distribution of international pharmaceutical abstracts. Results of a comprehensive survey of military pharmacy will be reported to the Section of Military Pharmacists by Colonel William L. Austin, Chief Pharmacy Consultant to the Surgeon General of the Army, and a member of the Yugoslav Military Delegation.

The tentative program outline for the Congress is to be included in the May issue of the American Journal of Hospital Pharmacy. It must be emphasized that this is only a very general skeleton outline and does not contain the list of papers to be presented nor all the topics to be discussed either at the General Assembly or at the meetings of the Sections.

According to circumstances this draft programme might be subject to modification.

A retrospective exhibition about pharmacy will be organized in the students' quarter of Brussels University. Members will have the opportunity to visit the Universal Exhibition and will enjoy many advantages. A special programme of visits and excursions will be worked out on behalf of the persons who accompany the Congress members.

F.I.P. Council Meeting, Yugoslavia

The Editor of the American Journal of Hospital Pharmacy is also the Vice President of the Press and Documentation Section of the F.I.P. and represents the Section on the Council of the F.I.P. In this capacity, the Editor attended the last F.I.P. Council meeting which was held in Opatia, Yugoslavia, September 25 to 28, 1957. Dr. Justin L. Powers was the official delegate of the A.Ph.A. to this meeting, while Colonel William L. Austin of the Army was a special delegate.

Student-Exchange Program

At its meeting on January 25, 1958, the Executive Committee of the ASHP voted to sponsor a program to promote the exchange of pharmacy students and recent graduates between foreign countries and the United States. Objectives of the program are to allow American students to visit other countries and to allow foreign

students to visit the United States to gain diversified experience in hospital pharmacy and to obtain a knowledge of the cultural and pharmaceutical life of the countries visited.

The motion as passed by the ASHP Executive Committee is as follows:

"It is recommended that the AMERICAN SOCIETY OF HOSPITAL PHARMACISTS officially sponsor a program to promote the exchange of pharmacy students and recent graduates between foreign countries and the United States so as to enable these students to gain diversified experience in hospital pharmacy practice, and it is further

"Recommended that this program be sponsored in cooperation with the International Pharmaceutical Students' Federation, which is affiliated with the International Pharmaceutical Federation, and with the American Liaison Secretary of the IPSF, and it is further

"Recommended that responsibility for implementing this program be assigned to the ASHP Committee on International Hospital Pharmacy Activities with the instruction that the ASHP Executive Committee be kept informed of progress and development of this program, and be it further

"Recommended that the AMERICAN SOCIETY OF HOSPITAL PHARMACISTS encourage the American College of Apothecaries to establish a similar student-exchange program for students who wish to gain experience in retail pharmacy in the United States."

While the ASHP Executive Committee has voted to sponsor the student-exchange program, official approval of the U. S. State Department must be obtained before the program can be implemented.

At present there is no national pharmaceutical organization in the United States which participates on a formal basis in the student-exchange program of the International Pharmaceutical Students' Federation. It has been suggested that an ideal arrangement would be one in which the AMERICAN SOCIETY OF HOSPITAL PHARMACISTS sponsored a program for hospital pharmacists and the American College of Apothecaries sponsored a similar program for retail pharmacists.

The SOCIETY'S program would be operated in cooperation with the student-exchange program of the International Pharmaceutical Students' Federation. The latter, an affiliate of the Federation Internationale Pharmaceutique, is composed of students from 24 countries, including the United States. The Students' Federation has been active for several years in fostering student-exchange programs and more than 130 individual exchanges have been arranged during the past two years. The Students' Federation has an American Liaison Secretary, Dr. Jerome Reinstein of the School of Pharmacy at the University of Wisconsin, who has offered to cooperate with the SOCIETY in this venture. He would receive applications from American students who wish to be assigned to European pharmacies and transmit them to the Chairman of the IPSF Student-Exchange Program, Dr. H. van der Meer of Leiden, Holland. In addition, Dr. Reinstein would receive from Dr. van der Meer applications from European students who wish to be assigned to hospital pharmacies in America. These applications would, in turn, be transmitted to the SOCIETY so that the applicants might be placed in hospital pharmacies cooperating in the program.

The general plan of the student-exchange program would be somewhat as follows. Pharmacy students or recent graduates would make application, specifying the country in which they would like to receive experience. The student may apply to work or to observe in a hospital pharmacy. The host pharmacist may accept a student for work or observation, whichever plan is mutually acceptable. The exchange period may be from one to three months, usually during the summer vacation period. Students pay their own transportation expenses. All students participating in the exchange program must be covered by health and accident insurance. Insurance may be obtained from the IPSF or from other sources. The student should receive from the hospital free board and lodging and a small amount of spending money, or a stipend sufficient to pay these expenses.

Successful implementation of the student-exchange program will provide American pharmacy students and recent graduates an opportunity to observe hospital pharmacy and retail pharmacy as they are practiced in other countries. While doing this, they may also observe the status of the European pharmacist in society and his role in public health activities; they may perfect their speaking and reading knowledge of a foreign language; they may take advantage of numerous cultural opportunities which will present themselves; and they may promote a greater mutual understanding between the pharmacists of the United States and other countries. Such a program would be a rich experience for American pharmacists whether they intend to enter hospital or retail practice.

Mr. Robert Abrams, Executive Secretary of the American College of Apothecaries, has been contacted regarding sponsorship by that organization of a similar exchange program for retail pharmacists. Mr. Abrams has replied that the attention of Mr. Cal Berger, President of the College, has been called to this matter and that it will undoubtedly be discussed by the Board of Directors of the College during the meeting in Los Angeles.

The next step will be to contact the Department of State, preferably in cooperation with the American College of Apothecaries, and to have the sponsorship of the program approved. This will be done as soon after the convention as possible.

When the program is approved, the Committee on International Hospital Pharmacy Activities will seek hospital pharmacists who wish to accept an exchange student in their departments. It will also call the attention of hospital pharmacy interns and recent graduates to the availability of opportunities to work in European hospital pharmacies during the summer months.

F.I.P. Membership

The Chairman of the SOCIETY'S Committee on International Hospital Pharmacy Activities continues to handle applications and dues for Associate Membership in the F.I.P. At present, the number of American Associate Members is approximately 200. The cost of Associate Membership is $2.75 per year. Members receive, with their dues, the quarterly publication of the F.I.P., the *World Journal of Pharmacy*. Languages used in the *Journal* are English, French, and German.

Application forms for membership in the International Pharmaceutical Federation may be obtained by writing to: Don E. Francke, University Hospital, Ann Arbor, Michigan.

Committee on International Hospital Pharmacy Activities: Don E. Francke, Chairman, Claude Busick, E. Burns Geiger, Thomas Reamer, Anna C. Richards, Adela Schneider, and Geraldine Stockert.

Report of the Committee on Safety Practices and Procedures

ROBERT L. LANTOS, *Chairman*

This is a new committee appointed by President Godley to study the safety measures in handling, storing, labeling, and distributing drugs in hospitals.

In recent years a number of accidents have been reported in the literature as well as in the lay press due to errors involved in the practices and procedures of handling drugs in hospitals. Probably more such accidents have occurred which never entered the literature or the press. Our Committee embarked on an extensive study of the cause of accidents and how they can be prevented.

Since accidents are usually caused by errors, the first consideration which should be given to a study of this nature is to review the underlying causes for errors. An error may be defined as a deviation from accuracy or correctness. The main factors which cause errors relative to our subject are a lack of education, improper training, poor organization and planning, fatigue, disturbances, lack of cooperation, inadequate staffing, faulty materials with which to work, lack of professional alertness, and finally, human nature. Our Committee considered all of these factors in attacking the problem.

We took the four subjects—handling, storing, labeling, and distributing—and applied them to drugs as they appear first at the manufacturer, secondly in the pharmacy proper, and thirdly in the nursing division. The latter is divided into the nursing station and the patient's bedside. It is readily seen that our project, although having its nucleus in the hospital pharmacy, extends far beyond this nucleus in its scope of activities. We have, therefore, conducted correspondence with several organizations, institutions, and individuals throughout the United States, Canada, and Europe who are interested in some phase of our project, either the administrative phase, the nursing phase, the hospital pharmacist's phase, the pharmaceutical manufactures' phase, or the topic of safety practices and procedures in general.

The American Hospital Association is very interested in the results of our study. A Manual on Hospital Pharmacy is being prepared by Mr. Joseph A. Oddis, pharmacy staff representative of the A.H.A., and he would like to include suggested safety guides in this manual. We have received excellent cooperation from the A.H.A. through Mr. Oddis. The A.H.A. librarian prepared a bibliography on medication errors and also made available to us on a loan basis several pieces of literature including the A.H.A.'s present *Hospital Safety Manual* which contains a small section on medications.

The Joint Committee of the ASHP and the A.H.A. has proposed that the ASHP work with the Department of Hospital Nursing of the National League for Nursing in preparing guides for safety in an effort to reduce medication errors. President Godley has appointed Mr. Robert Bogash and Dr. George Archambault of the Executive Committee to carry out the liaison between our Committee and the N.L.N. Miss Margaret Griffin, Director of the Department of Hospital Nursing of the National League for Nursing, has indicated a strong interest on the part of the League in this liaison. A joint meeting is being planned in the near future. It should be decided at this meeting whether there is a need for a separate Safety Manual prepared as a joint effort of the Nursing League and the ASHP or whether the guides which are drawn up by the League and the ASHP should all be incorporated into the Hospital Pharmacy

Manual which is being prepared by the A.H.A. This will probably depend on how far the scope of the A.H.A. Manual will extend. Manuals of this type should be designed for use in schools of nursing and pharmacy as well as for hospitals.

We corresponded with a number of safety associations, both on a national and state level, as well as with the safety divisions of some industrial firms. It was heartening to see the interest which these organizations had for our project, and it was surprising to learn of the particular awareness which some of the organizations had of pharmaceutical problems in general. For example, the Texas Safety Association sent us a list of seventeen suggestions pertaining to pharmacy such as "Out of date products should never be used; The pharmacy should practice good housekeeping since poor arrangement is unsightly and accident producing to those working in the area; If a prescription is one that will deteriorate after a certain period of time, the patient should be so informed;" and so on. The National Safety Council has a Department on Hospital Safety Service sponsored by the American Hospital Association. They sent us a bibliography of articles relating to our subject. The Corps of Engineers of the U. S. Army sent us an accident form and a safety manual which they use. The form when properly completed relates a full story of the incident for analysis to determine if adequate measures have been taken to prevent similar incidents. The manual is a detailed list of requirements including topics such as fire prevention, handling of tools, use of life preservers, etc. Two statements in the forward of the manual adequately describe its need:

1. "Accidents produce consequences which do not operate for the best interest of the Nation.

2. "Circumstances which cause accidents do not automatically adjust themselves with the passing of time; therefore a controlling medium is required."

The style, which is used in preparing both the form and the manual, is adaptable to our project.

President Godley chose a very appropriate year to appoint a Safety Committee in the ASHP, because the main subject of the hospital pharmacy section of the September meeting of the International Pharmaceutical Federation in Brussels will be "The Responsibilities of the Pharmacist Regarding Accidents to Patients Arising from Errors in the Pharmacy." Mr. Herbert S. Grainger of the Westminster Hospital in London, Secretary General of the Section on Hospital Pharmacy of the F.I.P., in a letter to the July-August edition of *The Bulletin*, expressed the hope that each national organization has already studied this subject and will be able to let him have the text of their studies by the end of the year. We have corresponded with both Mr. Grainger and Professor Jean Cheymol of Paris, President of the Section on Hospital Pharmacy of the F.I.P., informing them of our activities. A copy of this report will be made available to the F.I.P. Mr. Grainger also sent us a publication of the Pharmaceutical Society of Great Britain entitled, "The Control of Medicinal Substances in Hospitals" and the Society's Pharmaceutical Pocket Book which outlined the legislation regarding drugs in Great Britain.

Observations which we made fall in three areas of study—the pharmaceutical manufacturer, the hospital pharmacy, and the nursing service. The first area where the drug appears is at the manufacturer. Of the four topics, handling, storing, labeling and distributing, the one with which we were primarily concerned regarding the manufacturer was that of labeling since the company label affects the subsequent handling, storing and distributing of the drug by the pharmacist and nurse. We collected several questionable labels as well as comments from hospital pharmacists regarding this subject. From this information we composed two letters, one to the Food and Drug Administration and the other to twenty-one major pharmaceutical manufacturers.

In order to aid us in our study of accidents occurring in the pharmacy and on the nursing units, we conducted a pilot study by preparing an accident survey questionnaire and sending it to a number of hospitals. We were not interested in knowing the name of the hospital nor the name of the individual involved but only the statistical information regarding the nature of the accident, the type of hospital, the area of the hospital where the accident took place, the position of the person held responsible and the position of the person who actually was responsible, the results of the accident survey including administrative or legal action taken, and suggestions as to how the accident could have been prevented. Of the 63 accidents which were reported to us in a three month period, 46 took place on the nursing units and 17 in the pharmacy. Errors taking place on the nursing units included wrong medication given due to failure of the nurse to read the label correctly, wrong medication given due to confusion of nomenclature by the nurse, failure of the physician to indicate strength on the medication chart, wrong method of administration of the drug, wrong site of injection of the drug, medication given to the wrong patient, duplicate containers of the same medication given to a discharge patient by physician and nurse, transferring the wrong medication from one labeled bottle to another on the nursing unit, relabeling bottles on the nursing unit, nurse's failure to transcribe physician's orders correctly, medication was continued longer than the physician had ordered, wrong strength of a medication given, mistaken interpretation of the Latin abbreviation "q.d.," eye drops put in the wrong eye, patient ingested external medication which was left at his bedside. Three fatalities were reported, all involving drugs mistakenly injected in place of procaine. In two cases cocaine was injected for procaine and in the other cases pontocaine was injected by mistake. During the time of our survey two tragic incidents were reported in the lay press. One involved a technician in a physician's office preparing and administering a solution of sodium cyanide instead of dextrose to a lady for a diabetic test. The cyanide was on the shelf next to the dextrose. The result was fatal. The other case actually occurred two years ago but the settlement was recently approved. This involved the injection of morphine for codeine prior to tonsillectomy in a four-year old boy. The patient's heart stopped on the operating table and although it was massaged back into action the stoppage of the flow of oxygen to the brain left the boy permanently retarded both mentally and physically. The parents were awarded $50,000 by the hospital as well as lifetime hospitalization for the boy.

Suggestions for preventing these as well as other errors on the nursing units include the following:

1. Adequate staffing of the nursing unit is essential. The hospital should lower its patient census if it is not sufficiently staffed, rather than run the risk of errors due to the fatigue of the overworked nurse.

2. Written rules and procedures should be established governing the use of medications (from the physician's order to the patient's take-home medication). Fully defined relationships should exist between physicians, nurses, nursing supervisors, and pharmacists so that medications are constantly under strict control and are kept properly identified.

3. The nurses and others who handle medications should be properly oriented in the procedures, nomenclature, and other factors involved in the administration of medications.

4. The procedure of one nurse preparing and administering her own medication should be encouraged. If it is necessary for one nurse to receive a medication from another, she should not do so without seeing the bottle from which it was taken. No medication should be given by a nurse unless its identity is known. This includes investigational drugs.

5. Work area for preparing medications should be well-lighted, quiet, and relatively free of traffic. The nurse should not be interrupted when preparing medications.

6. Labels should be checked three times, when bottle is removed from shelf, when medication is poured and when bottle is returned to shelf.

7. Medications should not be transferred from one stock bottle to another on the nursing unit. There should be no repackaging on the nursing unit.

8. Any medication that is unlabeled, outdated, discolored, or of questionable identity, purity, or strength should be returned to the pharmacy.

9. Nursing unit drug cabinets should be standardized and then inspected periodically.

10. Present procedures of patient identification should be reviewed. Patients, especially children, change beds without notice, labels and charts are misplaced, patients even respond in the affirmative to the wrong name.

11. Attention should be given to the method of administration and the particular site of administration.

12. Bedside medications should be eliminated.

13. Literature on new drugs should be made available to the nurses. The nurse should refer to the information regarding techniques of administration, dosage, side effects, antidotes, and storage.

14. There should be a system for reporting medication errors.

15. A committee on patient safety should be established for the purpose of reviewing and analyzing error reports and recommending means to assure the safety of the patient. The committee should be composed of representatives from the nursing service, pharmacy, and medical staffs.

The errors in the pharmacy proper which were revealed in our suvrey involved labeling, manufacturing, prepackaging, dispensing the wrong medications to outpatients, failure to correct wrong directions or dosages on prescriptions.

Suggestions for preventing errors in the pharmacy include the following:

1. The pharmacy should be adequately staffed with properly trained personnel, both professional and nonprofessional.

2. Nonprofessional personnel should perform their work under the supervision of registered pharmacists.

3. To provide proper working conditions for the pharmacist, the pharmacy should be adequate in size, in lighting, in equipment, and maintained under sanitary conditions.

4. A standardized system of nomenclature and measures should be used in labeling.

5. If the pharmacy operates a prepackaging program, it should be done with a control system under the direction of a pharmacist. The control numbers should appear on every prepackaged stock container.

6. If the pharmacy operates a manufacturing program, it should be done with a control system under the direction of a pharmacist. The control numbers should

appear on every manufactured stock container.

7. A manufacturing program should be accompanied by an assay program either from within the department or from an outside source.

8. The calculations and the weighing of ingredients in a manufacturing program should be performed by one pharmacist and checked by a second pharmacist.

9. The reading of labels on bottles should be checked three times, when the bottle is removed from the shelf, when the drug or chemical is poured or weighed and when the bottle is returned to the shelf.

10. Ancillary labels should be used when necessary such as "for the eye," "shake well," etc. However, they should not be used unnecessarily, especially the word "poison."

11. The following storage requirements should be strictly observed:

a. The temperatures at which each drug should be stored as specified in the official compendium and by the individual manufacturers.

b. The federal and state regulations regarding the security of restricted drugs.

c. The fire regulations regarding inflammable items.

d. The requirements as to exposure to light and air as specified in the official compendium. This would apply to manufactured and repackaged items. Drugs appearing in the manufacturer's original bottle are the responsibility of the manufacturer.

e. The isolation of poisons.

12. One order or prescription should be filled at a time. If more than one label is typed at a time, it should be attached to its corresponding prescription or order blank.

13. Prescriptions for both outpatients and inpatients should be filled by one pharmacist and checked by a second pharmacist where practical.

14. In the outpatient dispensary control tabs should be taken from prepackaged bottles and affixed to prescriptions at the time of filling. The same procedure should be used with stock bottles except that these tabs will merely identify the product rather than contain a control number.

15. Unidentified substances should be discarded.

16. Proper pouring techniques should be observed.

17. Stock should be continually rotated. Out of date drugs and drugs of a questionable composition should be returned to the manufacturer or discarded.

18. Physiological compatibilities of medications should be checked when filling more than one prescription for the same patient.

19. The hospital should have a written policy on the handling of investigational drugs.

20. Good pharmaceutical sense should be used in typing labels. The physician's directions should be translated into understandable language for the laiety.

21. A pharmacist should personally present all prescriptions to outpatients and complicated or unusual directions should be explained to the patient.

22. An accurate method should be used for identifying outpatients before issuing medications.

The pharmacist is a specialist in the handling of drugs as a result of his education and training. Therefore, in addition to practicing safety in his own area, the pharmacist should assist the nurse in this respect. We are attempting to do this on a national level through this Committee. It can also be done on a local level. For example, Mr. Eli Schlossberg of Phoenix, Arizona presented an excellent paper on "Errors in Medication" to the Arizona Hospital Association last December. Mrs. Evlyn Gray Scott is the secretary for a Hospital Committee for the Professional Care of the Patient at the St. Lukes Hospital in Cleveland. At the Rochester, New York General Hospital, Mr. William Whitcomb worked with the Nursing Director and Administrator in developing a detailed set of rules pertaining to labels and has assisted in the preparation of the pharmacy section of the nursing procedural manual. Mr. Robert Simons of the Wilmington, Delaware Memorial Hospital sent us a study of nursing student errors in medication which was prepared at his hospital.

Recommendations

The Committee on Safety Practices and Procedures recommends:

1. That in order to further its campaign on safety the AMERICAN SOCIETY OF HOSPITAL PHARMACISTS continue this Committee.

2. That the SOCIETY actively engage in the proposed liaison with the National League for Nursing for the purpose of drawing up safety guides for hospitals and schools of nursing and pharmacy.

3. That the proposed joint committee of the SOCIETY and the National League for Nursing assist the American Hospital Association by submitting information on safety practices and procedures to the A.H.A. for inclusion in its manual on hospital pharmacy.

4. That the SOCIETY consider specific recommendations regarding the labeling suggestions made to the manufacturers and to the Food and Drug Administration.

5. That since the Director of Revision of the United States Pharmacopeia has shown a strong interest in our labeling suggestions, the SOCIETY cooperate with the U.S.P. in this regard.

6. That the SOCIETY appoint a representative to attend the meeting on Safety Practices at the forthcoming Section on Hospital Pharmacy of the International Pharmaceutical Federation in Brussels. This representative should present a report of our Committee activities to the F.I.P. and should bring a report of this meeting back to our Committee.

7. That the accident survey which was initiated by this Committee be continued by future committees.

8. That the programs on safety practices and procedures be implemented on a state and local level by methods exemplified in this report.

I would like to offer my sincere thanks to the members of this Committee and to all of the other persons who have contributed in this very vital battle against accidents. The human lives saved as a result of your efforts should indeed be rewarding.

Committee on Safety Practices and Procedures: Robert L. Lantos, Chairman, Jennie M. Banning, Ugo Caruso, Edward A. Hartshorn, Doris B. Hawkins, and Robert Simons.

Supplement to Report of Committee on Safety Practices and Procedures

From correspondence between the ASHP Committee on Safety Practices an Procedures, the Food and Drug Administration, and manufacturers:

The letter to the F.D.A. contained eleven *suggestions* which are listed below in condensed form:

"1. . . . all companies adopt the metric system as a standard system of measure . . . it would be satisfactory to put the apothecary equivalents in parenthesis on the labels after the metric figures, but the metric figures should be in bold print. If apothecary equivalents are used they should be standardized. For example, some companies refer to 0.25 Gm. as 3¾ grain, others refer to 4 grains as 260 mg. while the U.S.P. lists 0.25 Gm. as 4 grains . . . Morphine, 1/6 grain is sometimes referred to as 10 mg. and other times as 11 mg. If the companies omit the grains, then the pharmacist will have a better chance to educate the physician and nurse into using milligram terminology. The only exception to the use of the metric system may be in referring to drops.

"2. . . . all companies be required to print the strength of their preparations in bold type at the top of the label . . .

"3. . . . all companies be required to print the quantity in which the strength is contained in the same degree of size and boldness as the strength itself. For example, reports have been made of nurses giving an entire bottle of a pediatric suspension labeled '250 mg.' in big letters and 'per 5 ml.' in small letters, the nurse thinking that the entire bottle contained the 250 mg. The same has been reported with heparin and ACTH with a big '40 units' on the label but only a very small 'per ml.'

"4. . . . that companies which market different products (here we are referring primarily to ampoules) in similar sized and shaped containers, use different styles of printing or arranging each of the labels, one could be printed horizontally, the other vertically. This could reduce the chance of the hurried nurse taking the wrong ampoule from the shelf and giving the wrong medication . . .

"5. . . . all companies be required to follow the U.S.P. XV specification regarding the equivalent of the teaspoon as being 5 ml. since this specification is based on the American Standards Association which has established an American Standard Teaspoon as containing 4.93 + 0.24 ml. . . . The difference between 4 ml. and 5 ml. could cause a 20% error by the physician when determining a dosage.

"6. . . . all companies be required to mark their capsules and tablets with either the company initials, name, trademarked insignia or some other means of identification to facilitate rapid pharmaceutical company identification in case of emergency. Also the company should describe each of its products in its catalog by color, shape, etc. Combined use of these two aids will enable the pharmacist to quickly identify an "unknown" tablet or capsule which the physician or nurse frequently brings to the pharmacy.

"7. An additional identification should be made if a company markets a tablet or capsule in more than one strength. Each strength should be individually identified either by dots, color, shape, etc . . .

"8. . . . all companies be required to package poisons in containers of the same color and the public should be educated as to this fact. The drugs that fall into the poison category should be determined by the F.D.A.

"9. . . . all companies be required to include an antidote section as a part of the brochure enclosure which accompanies the medication.

"10. . . . all companies be required to date their literature concerning drugs. Sometimes a company will change the recommended dosage schedule for a drug because of certain reasons . . . If the literature is dated, the physician can refer to the latest literature.

"11. Some manufacturers have commented that they are having difficulty fitting all of the F.D.A. required information on the labels of the small bottles. Perhaps some of the requirements could be restated if there is any justification to these comments."

Our letters to the manufacturers contained essentially the same points as in the F.D.A. letter. However, there were three additional suggestions:

"1. . . . the label of a compound item should contain the strengths of the individual ingredients, all in the same degree of size and boldness and the total strength should not be included on the label . . .

"2. . . . closer adherence should be given to pharmaceutical definitions in labeling. For example, if a product is labeled as a syrup, by pharmaceutical definition it should be completely soluble and require no shaking. If it is a suspension, it should require shaking. Many products are labeled incorrectly according to these definitions.

"3. . . . a check should be made to make certain that a definite distinction is made on the labels of a drug which is marketed in more than one form of administration. A representative of the F.D.A., in a paper presented to the Catholic Hospital Association in 1950, cited the case of a smooth-muscle stimulant which was marketed for injection by a company some years ago. Later the manufacturer put out the same drug in ophthalmic form, also in ampoules but containing a much greater quantity of the active ingredient. Both preparations carried the same trade name, the labels were similar in appearance, and both were marked "not for intravenous use," although the more potent one was lethal if injected in any manner, a fact the label failed to reveal. In fifteen known instances, the ophthalmic product was inadvertently substituted for the injectable solution and in every case the patient died, all cases occurring in hospitals. In most of the cases the physician simply directed that one ampoule of the product be given."

Another suggestion has come to our attention since our letters were sent: " . . . the names for new drugs coming on the market should be made distinctly different than any which are presently available. For example, Sigmagen could be confused with Sigmamycin, Pavatrine with Papaverine, or Argyrol with Agarol. Such similarities could lead to error."

We had a reply to our F.D.A. letter from Mr. N. E. Cook of the F.D.A.'s Bureau of Enforcement. He indicated that, although our suggestions, for the most part, are outside the scope of the present law of the F.D.A., that the F.D.A. will endorse in principle any practical measures that will improve the safety of drugs and they, therefore, are awaiting with interest the final recommendations that are adopted by the ASHP. Commenting specifically on some of our suggestions, Mr. Cook noted that the F.D.A. has encouraged the metric system as the preferred method for potency declaration of drugs. They endorse our suggestion on the teaspoon equivalent; they agree that an antidote section included in a product brochure would be highly desirable if the drug has an established antidote; they agree to the suggestion that companies should date their brochures; they recognize the fact that all the required F.D.A. information is difficult to fit on the label of a small ampul, and they have allowed that in such cases only a minimum information is required, that is the quantitative declaration of the active ingredients, the control number, and the name of the firm. He pointed out that in some cases a company will want to use a prominent identifying mark or symbol on a label plus a prominent display of the trade name, and this sometimes leaves less space than is needed for the mandatory information required by law.

We have also received a reply from eleven of the manufacturers. They unanimously commended our Committee for working on a project of this nature. One of the companies indicated that since its products were used in a variety of situations, that is in the hospital, the physician's office, the retail store, and in the home, its package and labels were, therefore, designed to make them acceptable to all concerned. They welcomed our suggestions since these were the first they had received from a hospital pharmacy group. The companies in general favored our proposal for the universal acceptance of the metric system, and several have already switched over to this system exclusively. There was also a general acceptance to the 5 ml. teaspoon equivalent. A few of the companies pointed out that it may take some time to facilitate these changes because of the many labels and packages which were presently in stock.

One of the manufacturers forwarded our letter to the U.S.P. On February 21st I received a letter from Dr. Lloyd Miller, Director of Revision of the U.S.P. He was greatly interested in our project and asked for permission to refer our suggestions to the U.S.P. Committee on Revision. He will also refer to our project in addressing a general session of the A.Ph.A. at this convention.

Report of the Committee on Isotopes

PETER SOLYOM, *Chairman*

Over the past several years the Committee on Isotopes has concentrated its efforts in four general areas. They are: (1) to develop suggestions for special courses for hospital pharmacists in the handling of isotopes in hospitals; (2) to determine the feasibility of an isotope section operated by the pharmacy department; (3) to determine layout and design for a radioactive branch of a pharmacy department; and (4) to compile a bibliography on isotopes. Much of the ground work in these areas has been accomplished by previous committees.

An outline for "A Course in Isotope Pharmacy" has been proposed by the Committee. The feasibility of an isotope section operated by the pharmacy department has been proven in a number of hospitals throughout the country. An equipment list and suppliers plus basic floor plans for an isotope unit have been presented by the Committee. A bibliography and supplements have also been compiled.

During the past year the Committee on Isotopes has concentrated its efforts on reviewing past accomplishments and compiling a supplement to the bibliography on isotopes.

There are presently over 1,700 medical institutions using radioisotopes. The Committee feels that the reason more active participation is not granted to the pharmacy department is possibly the limitations in the hospital pharmacist's training in the handling and use of radioisotopes. In view of this fact the Committee on Isotopes would like to reiterate some of the recommendations of the first Isotope Committee. They are:

1. It is recommended that the SOCIETY work with the Atomic Energy Commission Isotopes Division, the Radiological Health Service, and the American Association of Colleges of Pharmacy to further develop and fully approve the proposed outline for a course in isotope pharmacy.

2. It is recommended that the SOCIETY work with the American Association of Colleges of Pharmacy to explore the possibility of offering a course in isotope pharmacy on a regional basis, thereby making it available to the largest number of pharmacists possible.

3. It is recommended that the American Hospital Association's Committee on the Use of Isotopes be informed of the aims of the SOCIETY with regard to a radioisotope program in the hospital.

It is hoped that the reiteration of these recommendations and the supplement to the bibliography will aid the hospital pharmacist in rendering service to his hospital.

Committee on Isotopes: Peter Solyom, Chairman, Herbert L. Flack, Clifton Latiolais, Paul F. Parker, and Evlyn Gray Scott.

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Report of the Committee on Hospital Pharmacy Laws, Regulations, and Legislation

JAMES W. MITCHENER, *Chairman*

There is nothing new to report on the activity of this Committee for the past year. This is due mainly to the failure of the committe chairman to get the committee activity underway. The lack of activity is in no way intended to indicate that we feel this committee is not important.

A great contribution was made this past year to hospital pharmacy by the publication in the May-June issue of *The Bulletin*, a special number devoted to "The Law of Hospital Pharmacy." It contained valuable and informative articles by: Archambault, Bates, Groeschel, Francke, and Grettenberger. We strongly recommend that all hospital pharmacists read these articles in detail and keep this edition available for frequent reference. These articles reveal the complexities of laws and regulations and their growing importance to us in hospital pharmacy.

The Committee brings you no resolutions requiring action this year but we strongly request that this Committee be continued from year to year so that hospital pharmacists may be advised of changes as they are made.

Committee on Hospital Pharmacy, Laws, Regulations and Legislation: James W. Mitchener, Chairman, Harold Black, Claude Busick, Claude Paoloni, and Ruth Pully Summers.

Report of the Committee on Professional Liability Insurance

ETHEL PIERCE, *Chairman*

It is a pleasure to report to you on the progress made during the year by this Committee.

First of all, the Massachusetts Society has already had one year of experience with coverage for its members. The national figures show only a 22 percent participation for professional groups for such insurance; this was one reason most companies were reluctant to do anything for us. We were able to show approximately 36 percent of our group participating and they then decided that we were seriously investigating coverage.

Juries are today awarding larger verdicts for damages and people are becoming more and more "suit conscious." Any trend toward a recession will bring more claims, also. During the week of January 1, a 1954 case was settled against a New York hospital for an alleged pharmacy error. The amount of the out-of-court settlement was $72,500. It therefore, behooves the hospital pharmacist to protect his reputation as well as his home, possessions, and salary check. Most of us today are not insured against this eventuality. Moreover, a hospital may have coverage and the pharmacist as an individual may be sued. This premise should establish the need for Professional Liability Insurance. Also, the membership has expressed an interest in this type of insurance and it appears that in offering another service to the individual member of the ASHP, it could increase the membership and thereby strengthen our Society.

A thorough investigation has been made of insurance from various classes of insurance carriers, and much time has been spent in interviews with underwriters and sales personnel of the mutual companies, brokers, and others in the field. In discussing the type of coverage, we have asked for premium rates for 100,000/300,000 limits. In exploring the brokerage field, we find a wide divergence of services rendered and in the states which would be included. No one brokerage company to date has offered rates for all states. No broker can render other service than sales and collect premiums. That will be the responsibility of the individual office of the insuring company in the area of the policyholder, and the broker is liable to place the business with the company paying him the largest commission unless a specific company is specified by the insured. It should be pointed out that in settling claims, brokers use a Claims Service system which is completely independent of the company in many cases.

Brokerage Firms: One broker, for example, has listed the following conditions which must be met:

1. Each insured must be a member of the Association.
2. Each must be a graduate of a four-year college of pharmacy course.
3. Each must have passed the state exam in which he is working.
4. Each member will have the same limit of liability for coverage.
5. At least 50 percent of the membership must be willing to join the group.
6. There will be a single billing and a single remittance.
7. The only firm rate quoted at present is $18.90 for 50,000/150,000 limits.

Mutual Companies: Liberty Mutual Insurance Company of Boston quote as follows:

"After much consideration, we have come to the conclusion Liberty Mutual might well be interested in underwriting the liability program for the Association captioned above. Because of the internal procedures involved in writing such a risk, there are many items that add up to a fairly high expense factor. It is for this reason that we feel that the following qualifications must be met before we will underwrite the risk:

"1. The solicitation of the individual members will be the responsibility of the Association,

"2. We must be guaranteed a substantial percentage of the entire membership.

"3. The Association will assume the responsibility of collecting the premium from the individual members. This meaning, of course, that we will bill the Association and it will be held responsible for the payment of the premium. The policy we issue will be a Master Policy and certificates will be issued by the Association for the members desiring the coverage."

The percentage agreed upon the basis of present membership was 500 members.

In considering any blanket policy for our group two major considerations about the carrier should be taken into account; (1) The stability and reliability of the company and (2) the quality of service that company can render. The coverage should be three-fold: (1) bodily injury, (2) property damage, (3) products liability. The company, in the event of a claim, should investigate the claim, and assume the entire cost of the investigation, including legal counsel if necessary, and the payment of a judgment within the limits of the policy.

In any analysis of this problem, the carrier should be required to meet the following requirements:

1. Have a license to do business in all 48 states.
2. Have facilities to perform service.
3. Have rates that are in accordance with exposure.

Several questions have already been asked by members and an attempt is made to answer as many as possible.

1. Products Liability will include not only the prescriptions filled, bulk compounding, large and small volume parenterals manufactured, but also products purchased; in the last instance recourse to the original manufacturer would then be made.

2. The question of joint coverage of the hospital and the pharmacist, each being covered by the same company, was asked since it is reasonable to assume that with a large company there would be some overlapping interests. In this case the liability of the hospital and the pharmacist would be strengthened by coverage with the same company since the company would then have access to all the records, and more interest in a better defense since its exposure would be greater.

3. Settlement and liability. Settlement of a claim may be made but this does not necessarily fix liability upon the pharmacist. The occasion may arise where a claim is settled for economic reasons even though the liability is severely questioned. This, however, would not damage the reputation of any of our members as in this type of negotiation, liability is specifically denied by the legal instrument used.

Conclusions

The need for such Professional Liability Insurance has definitely been established, and it has been pointed out how such a service can benefit the individual member and the Society as a whole. Lastly, the necessary ground work has been laid for establishing such a service to the members.

Recommendations

Since none of the plans to date has been completely satisfactory to meet our needs, it is recommended that the Committee be continued for the coming year and that it be instructed to further investigate all the remaining possibilities for coverage of Professional Liability Insurance. It is further recommended that the Executive Committee give serious consideration to the possibility of offering this coverage as a service to the members and as an incentive to new members to join the ASHP.

Note: The membership is referred to the *Manual on Insurance for Hospitals* published by the American Hospital Association for general information on the Insurance Industry.

Committee on Professional Liability Insurance: Ethel Pierce, Chairman, Charles Barnett, Claude Busick, Charles Schraub, Edward J. Singer, and William Woods.

Report of the Committee on Special Projects

BENJAMIN TEPLITSKY, *Chairman*

The Chairman of the Committee on Special Projects was fortunate to continue the work of this Committee for another year after receiving wonderful cooperation the preceding year.

The Committee contacted the Chapters as early as May 1957, and then again in September of the same year. Routine correspondence was carried on with the Chapters as necessary. The results obtained were highly satisfactory.

Of the 47 Chapters contacted, 32 replied. Of these 32 Chapters, 23 are actively participating and are engaged in a total of 60 projects.

In September 1957, the Chairman of the Committee on Minimum Standards requested this Chairman to help in its

long-range plans in attempting to revise the present Minimum Standard for Pharmacies in Hospitals. Our Committee agreed to help and proceeded to contact 47 Chapters. As this report is submitted, 18 Chapters have assured their cooperation in this urgent project.

Listed below are the Chapters participating in this year's program. The projects selected by the various Chapters are also indicated.

There is included a list of the Chapters who have indicated a desire to participate in the long-range revision of the current Minimum Standard for Pharmacies in Hospitals.

Chapter Projects

1. *Arizona*
   - Pharmacy-Nurse Committee
2. *Northern California*
   - Household and Economic Poisons
3. *Southern California*
   - Retail Price Survey and Pricing Methods
   - Accidental Poisoning
   - Barium Suspension Preparation
   - Control and Investigation of Drugs
   - The Handling and Control of Narcotics and Hypnotics in Hospitals
   - Medication Pricing
4. *Connecticut*
   - Insurance
5. *Georgia*
   - The Pharmacy Reference Shelf on Accidental Poisoning
6. *Illinois*
   - Ways and Means to Get More Interested in Hospital Pharmacy
7. *Maryland*
   - Participation in Radioisotope Program
   - Promotion of Generic Names
   - Survey of Pharmaceutical Services in Hospitals of Maryland
   - Institution of Filing System for Product Information
   - Accidental Poisoning—Aspects of Public Relations
8. *Michigan*
   - Salary Survey
9. *Nebraska*
   - Poisoning in Children—Talks
10. *Greater New York*
    - Advantages and Disadvantages of Purchased and Hospital Prepared Products for Hospital Pharmacy—A Survey
11. *Northeastern New York*
    - Hospital Pharmacy Metrology Survey
    - Time Clock Survey
    - Survey of Chapter Dues
    - History of Northeastern New York Society of Hospital Pharmacists
12. *Western New York*
    - Poison Control Activity
    - Hospital Pharmacy Assistance in Sorting Drug Samples for Salvation Army
13. *North Carolina*
    - Accidental Poisoning—Household and Economic
    - Pharmacy Operated Central Sterile Supply in State
    - Study of Hospital Pharmacy Practice and Problems in General
14. *Akron*
    - Student Visitation Program
    - Recruiting High School Students for College of Pharmacy
15. *Greater Cincinnati*
    - Manufacturers to Have Drug Information on Cards as well as Paper Literature
    - Manufacturers to Make Available to Hospital Pharmacist Information on Clinical Drugs (Drugs not available in Interstate Commerce)
16. *Cleveland*
    - Compiling Hospital Formulas Useful in our Area
17. *Oregon*
    - Oregon Branch Seminars
    - Annual Visits of Pharmacy Students
18. *Western Pennsylvania*
    - Drive to Increase Local and National Membership
    - Survey of Hospital Pharmacies' Inventories
    - Program for Influencing Physicians to Use Generic Names
    - Exchange of Pharmacy Interns between Member Hospitals for a Day or Two to Exchange ideas and Information
    - Common Household Poisons and Antidotes
19. *Philadelphia*
    - Filing System for Hospital Pharmacy
    - Labeling and Prepackaging
    - IBM Machine in Internal Costing in Pharmacies
    - Preparation of Parenteral Products by the Hospital Pharmacist—a two week course
    - Radioisotope Technique—a two week course
    - Analysis of Medications—a two week course
    - Human Relations and Procedures for the Hospital Pharmacist—a 12 week course
    - Evaluation of Chemical Sterilizing Agents for Hospital Application and Use—a research project
    - Development of a Non-Flammable Effective Adhesive Remover
    - Feasibility of Hospitals Manufacturing Disposable Cartridge Medications
    - Punch Card Mechanization of Pharmacy Accounting Procedures
    - Code for Detailing in Member Hospitals
    - Survey of the Teaching Programs in Member Hospitals
    - My Objectives and/or Future in Hospital Pharmacy—a student essay contest
    - Common Household Poisons and Antidotes
20. *Rhode Island*
    - Poison Control Center
21. *Texas*
    - History of Hospital Pharmacy Seminars in Texas 1949-1956
22. *Utah*
    - Procedures for Work Done in the Hospital Pharmacy
    - Establishing a Poison Center and Antidote Research on the Household Poisons
23. *Washington State*
    - Criteria for Evaluating Compliance with Drug Standards for Hospital Pharmacies

The following Chapters have indicated a desire to participate in the long-range plan for the revision of the current Minimum Standard for Pharmacies in Hospitals:

1. Northern California
2. Dade County (Miami, Fla.)
3. Georgia
4. Louisiana
5. Michigan
6. Greater Kansas City
7. Greater St. Louis
8. Northeastern New York
9. Greater New York
10. Western New York
11. North Carolina
12. Akron Area
13. Ohio
14. Oregon
15. Western Pennsylvania
16. Philadelphia
17. Houston Area
18. Utah

It was gratifying to have worked with the members of this Committee. To have been Chairman was a pleasant and enjoyable duty.

Committee on Special Projects: Benjamin Teplitsky, Chairman, Sister M. Gonzales, Herbert Flack, Louis P. Jeffrey, and Clifton F. Lord.

Report of the Division of Hospital Pharmacy

PAUL F. PARKER, *Director*

The Division of Hospital Pharmacy of the American Pharmaceutical Association and the AMERICAN SOCIETY OF HOSPITAL PHARMACISTS was established as the operating unit for hospital pharmacy activities of both organizations. The Director of the Division works under the administrative direction of the Secretary of the American Pharmaceutical Association, who is also Chairman of a Policy Committee of the Division. The members of this Policy Committee are composed of four representatives from the AMERICAN SOCIETY OF HOSPITAL PHARMACISTS, two from the American Pharmaceutical Association, one from the American Hospital Association, and one from the Catholic Hospital Association.

Under the terms of a formal agreement between the American Pharmaceutical Association and the AMERICAN SOCIETY OF HOSPITAL PHARMACISTS, the functions of the Division were established as follows:

1. Furthering the objectives of the AMERICAN SOCIETY OF HOSPITAL PHARMACISTS as set forth in Article 1 of the Constitution of that organization and pertinent objectives of the American Pharmaceutical Association as set forth in its Constitution.

2. Integrating the activities of the AMERICAN SOCIETY OF HOSPITAL PHARMACISTS with those of the American Pharmaceutical Association.

3. Building up the membership of both the AMERICAN SOCIETY OF HOSPITAL PHARMACISTS and the American Pharmaceutical Association.

4. Make available to the members of the AMERICAN SOCIETY OF HOSPITAL PHARMACISTS and to all individuals, agencies and organizations interested in hospital pharmacy or requiring information on hospital pharmacy, the full resources of both the American Pharmaceutical Association and the AMERICAN SOCIETY OF HOSPITAL PHARMACISTS.

5. Promoting and assuring the future of the *Bulletin of the American Society of Hospital Pharmacists* in cooperation with the Committee on Publications of the American Pharmaceutical Association.

6. Providing an administrative unit with career personnel and necessary clerical assistance to further the interests of the AMERICAN SOCIETY OF HOSPITAL PHARMACISTS and hospital pharmacy in general.

7. Providing necessary funds with which to accomplish the objectives sought.

It will be noted that the functions describe only in a general way, the duties carried on in the Division office. In organizational work there is no well-defined end point by which the duties could be said to accomplish the functions. This report, therefore, will deal rather extensively with the details and statistics concerning the duties performed to accomplish these functions by Division personnel since the last Convention.

General Administrative Functions

It is the responsibility of the Director to develop procedures for each routine activity in order to best utilize the facilities and resources available at the Headquarters Building; to supervise their implementation and to see that they accomplish the objectives.

A large portion of the Director's time is spent in composing letters, speeches, items for publication, and similar duties. It might appear that these are of a routine nature, but actually, this is not the case. We feel that the request of any individual hospital pharmacist, agency, or organization received by the Division of Hospital Pharmacy, is entitled to personalized attention, regardless of its nature. It might be interesting for you to know that, for instance, during the past year the number of items in our chronological file totals over 2,000. Obviously some of these items require very little time and can be accomplished in a routine way. Others require hours of research, or perhaps referral to other sources to obtain the desired information.

Another time consuming activity of the Director is that of traveling throughout the United States to participate in meetings, conferences, conventions, etc. The following is a resume of the meetings attended during the past year:

Akron, Ohio
The Visitation Program of the Akron Society of Hospital Pharmacists.
Cleveland, Ohio
ASHP Executive Committee meeting and Hospital Pharmacy Institute of the Catholic Hospital Association; also a hospital pharmacy display at the Catholic Hospital Association Convention.
Seattle, Wash.
American Hospital Association Institute on Hospital Pharmacy.
Coos Bay, Ore.
Visit to McCauley Hospital
Chicago, Ill.
Visit to Headquarters of the American Hospital Association
New York, N.Y.
Conference betwewen AMERICAN SOCIETY OF HOSPITAL PHARMACISTS and National Pharmaceutical Council.
Chicago, Ill.
American Hospital Association Institute on Hospital Pharmacy.
Atlantic City, N. J.
Exhibit at American Hospital Association Convention.
Atlantic City, N. J.
Conference between AMERICAN SOCIETY OF HOSPITAL PHARMACISTS and National Pharmaceutical Council.
New York, N. Y.
Meeting of the AMERICAN SOCIETY OF HOSPITAL PHARMACISTS' Research Grant Selection Board.
Ann Arbor, Mich.
Meeting of the AMERICAN SOCIETY OF HOSPITAL PHARMACISTS' Committee on Constitution and By-Laws.
Washington, D. C.
ASHP Executive Committee Meeting.
Washington, D. C.
Pan-American Congress of Pharmacy and Biochemistry.
Washington, D. C.
American Hospital Association Institute Planning Conference.
Indianapolis, Ind.
American Association for the Advancement of Science.
Kalamazoo, Mich.
AMERICAN SOCIETY OF HOSPITAL PHARMACISTS' Executive Committee Meeting.
Buffalo, N. Y.
University of Buffalo, College of Pharmacy.
Rochester, N. Y.
Meeting of Rochester Area Society of Hospital Pharmacists.
Washington, D. C.
Joint Committee American Hospital Association and AMERICAN SOCIETY OF HOSPITAL PHARMACISTS.
Philadelphia, Pa.
Temple University, College of Pharmacy.
Washington, D. C.
National Planning Conference on Nursing Homes and Homes for the Aged.
Chicago, Ill.
American Hospital Association Institute Planning Conference.
Cincinnati, Ohio
Meeting of the Ohio Society of Hospital Pharmacists.
Boston, Mass.
Meeting of the New England Hospital Council.
Milwaukee, Wis.
Seminar for the Wisconsin Society of Hospital Pharmacists.

The opportunity to participate in meetings with hospital pharmacists across the nation provides a unique insight into the matters of importance to hospital pharmacy as a specialized field. To be able to discuss these matters with pharmaceutical and other health groups confirms the feeling that hospital pharmacy is an important aspect of our nation's total health program. Its contributions and rapid progress are recognized throughout the health professions.

One conference of interest which seems worthy of calling to your particular attention, is the National Planning Conference on Nursing Homes and Homes for the Aged, which was attended by the Director of the Division of Hospital Pharmacy as a representative of the American Pharmaceutical Association. This conference was called by the United States Public Health Service with 141 individuals from across the nation representing non-Federal agencies, participating.

The conference was called to study and explore all aspects of service in Nursing Homes and Homes for the Aged. The conference consisted essentially of two plenary sessions and five half-day working sessions with eight separate conference groups. The use, administration, and procurement of drugs was an important consideration in the Section on Medical, Nursing and Other Selected Professional Services. This Section recommended that a study be made to determine the requirements of nursing homes and homes for the aged with relation to supply, availability, storage, dispensing, and supervision of administration of medication. If these recommendations are implemented through the Federal Government, the results of the study may provide important data concerning drugs with relation to the 25,000 nursing homes in the United States. Such data would undoubtedly be helpful in determining the drug needs in the small hospitals of the nation.

We are most happy to have the opportunity of working closely with the American Hospital Association in planning, promoting, and coordinating the two Annual Institutes on Hospital Pharmacy. The Program Chairman of the AMERICAN SOCIETY OF HOSPITAL PHARMACISTS submits a tentative program for each Institute and this is developed further in a conference among representatives from the American Hospital Association, the AMERICAN SOCIETY OF HOSPITAL PHARMACISTS and the Division of Hospital Pharmacy. Every endeavor is made to develop programs which will most adequately serve the needs of practicing hospital pharmacists according to past experience in the Institute programming and from resources available.

After the programs have been developed, the hospital pharmacist staff representative at the American Hospital Association,

and the Division Director handle all details of planning and promoting the Institute itself. Both cooperate further in coordinating the Institute during the time it is being held. It is interesting to note that well over three-fourths of the Institute enrollees have never previously attended such a program, and this therefore, indicates that an ever increasing number of newcomers to hospital pharmacy practice are participating in this type of continuing educational program.

In addition to the above duties, the Director of the Division of Hospital Pharmacy also assists in the National Pharmacy Week promotion and other American Pharmaceutical Association activities. Besides providing an opportunity to obtain experience in the broader aspects of organizational affairs, these assignments provide the opportunity to integrate matters of concern to hospital pharmacy with the whole pharmaceutical profession.

Other personnel in the Division office includes a full-time secretary and a part-time clerical assistant who handles essentially all membership and other routine activities. The services of personnel in other departments at the American Pharmaceutical Association headquarters, such as mailing, printing, addressograph, library, membership and bookkeeping are available to the Division staff.

Personnel Placement Service

The Division has operated a Personnel Placement Service for a period of years. Beginning in August, 1957, the Service was reevaluated and the procedures for its implementation more clearly defined. The ultimate purpose of the Personnel Placement Service is the improvement of the pharmaceutical services in hospitals by more adequately fulfilling hospital pharmacy personnel needs and by locating positions which provide challenging opportunities for pharmacists who have indicated an interest in hospital careers. By participating in the Service, the hospital indicates a desire to achieve a pharmaceutical service that meets the Minimum Standard for Pharmacies in Hospitals. Since the beginning of September, 47 hospitals have participated in the service and 86 pharmacists have submitted applications. It is difficult to determine the exact number of placements that have been made as a direct result of the Service since our office only provides the initial contact, but the Service is well received.

The possibilities for the development of an activity such as the Personnel Placement Service are almost limitless. Last September, the Division exhibit at the American Hospital Association Convention in Atlantic City was devoted to the Personnel Placement Service, but other than this, there has been only limited attempts to acquaint hospital administrators with the Service. Hospital pharmacists have the opportunity of becoming acquainted with the Service through the AMERICAN SOCIETY OF HOSPITAL PHARMACISTS. Obviously, if the Service were more widely publicized, the number of hospitals and pharmacists using it would be greatly increased. According to present plans, publicity and promotion of the Service will be increased gradually as we are able to further systematize it and have personnel available. At the present time there is no plan to expand the scope of the Service to compare with professional agencies.

The Division office also processes a rather large number of requests for reprints, back issues of the *Bulletin* and other miscellaneous sales. From time to time, we have been requested by hospital pharmacists to provide a list of reprints available from our office. This is not possible. Actually, to date, all available reprints have been provided from the *Bulletin*, or from individuals or agencies who contributed them without charge. All charges that are made for these items are credited to the *Bulletin* account. Only occasionally do we have available any significant number of a particular reprint. Usually, we are given a few copies of each reprint, made from articles that appear in our official publication, and they are used to answer requests for information or to send to those individuals who have a particular interest in that article. If a list of the reprints which we have available was published, obviously our supply of any one reprint would be depleted in a very short time. The fact is that there are insufficient funds available to have large quantities of reprints made and only when we are assured that there will be widespread demand for an article, are reprints ordered in quantity. For example, the articles on "The Law of Hospital Pharmacy" and the "Suggested Regulations for Handling Narcotics in Hospitals" were reprinted in large numbers.

A number of formularies, publications, and miscellaneous documents of particular interest to hospital pharmacy are made available on a loan basis through the reference library of the American Pharmaceutical Association. Again, it is not possible to publish a list of such items available. For instance, an item which may be in popular demand at one time, will, for various reasons, have only limited usefulness.

The important point about the specialized services at the Division of Hospital Pharmacy is that we would like hospitals and hospital pharmacists to recognize that the Division of Hospital Pharmacy is a central office to which they can direct all requests for information concerning hospital pharmacy. By receiving large numbers of requests for any specific type of information, we can usually obtain the materials and provide the service to satisfy these needs, even though it may be necessary to make a nominal charge on a cost basis.

There is a rather wide-spread awareness of the Division as a central source of information on hospital pharmacy as indicated both by the number of inquiries received, and the diversity of their origin. Principally, requests come from hospital pharmacists, pharmacists in other fields of practice, individuals in other health groups, agencies and organizations. Since many requests are simply directed to the American Pharmaceutical Association or the AMERICAN SOCIETY OF HOSPITAL PHARMACISTS, it is thus an advantage for the Division office to be located in the American Pharmaceutical Association headquarters.

The requests usually may be classified in three categories: (1) Policy information —which can be provided from the official reports, resolutions and other official documents of either the American Pharmaceutical Association or the AMERICAN SOCIETY OF HOSPITAL PHARMACISTS. We are fortunate in our close affiliation between the two groups that the policies will only rarely, if ever, be in direct conflict. (2) Technical information—about drugs, formularies, and other pharmaceutical matters which can usually be obtained from the American Pharmaceutical Association reference library. (3) Advisory information—such as requests to, "write speeches," "write theses," plan programs, or other matters of such a miscellaneous nature. In these instances we are only able to give general suggestions based upon personal experience, or refer them to individuals who have had wide experience in their field of interest.

American Society of Hospital Pharmacists' Activities

A large proportion of our routine work is concerned with the AMERICAN SOCIETY OF HOSPITAL PHARMACISTS' activities. One of the most important of these is membership, which may be considered as encompassing solicitation, new members, renewals, billing, dropped members, and delinquent members.

Invitations to join both the American Pharmaceutical Association and the AMERICAN SOCIETY OF HOSPITAL PHARMACISTS are sent to all prospective members whose names come to the attention of the Division office. During the past year, over 300 such invitations were sent. We anticipate that a routine procedure for this activity can be developed in close cooperation with the AMERICAN SOCIETY OF HOSPITAL PHARMACISTS' Membership Committee.

We have received 411 new membership applications since the last Convention. Each application is checked against the American Pharmaceutical Association membership files to determine whether they are members of that organization, the anniversary of their membership, and the status of their dues payments. Very frequently new member applicants do not understand that membership in the American Pharmaceutical Association is a prerequisite for membership in the AMERICAN SOCIETY OF HOSPITAL PHARMACISTS. In this respect SOCIETY members could be very helpful to us by advising prospective members of this requirement and thereby eliminate the necessity for a considerable amount of correspondence. A communication is sent to each new member to advise him when his membership will begin; he is sent back issues of the AMERICAN JOURNAL OF HOSPITAL PHARMACY where indicated; a membership certificate, pocket card and insignia pin is also sent. The membership status of each new applicant is determined on the basis of whether he is a practicing hospital pharmacist; dues are forwarded to the Treasurer of the SOCIETY; new members, with sponsors, are listed in the AMERICAN JOURNAL OF HOSPITAL PHARMACY and addressograph plates are prepared, both in Washington and in the Circulation Department at the Hamilton Press. A complete record is kept in the Division office, of each member and officers of the SOCIETY are advised of every change in that record.

At the present time the SOCIETY membership numbers 2,762. Every individual membership must be renewed annually. Every renewal is checked against the membership records of the American Pharmaceutical Association and none is credited until the dues in that organization have been paid. This procedure guarantees that every member of the AMERICAN SOCIETY OF HOSPITAL PHARMACISTS is a member of the American Pharmaceutical Association in good standing. Each renewal necessitates bringing the records up-todate, forwarding a new membership certificate and pocket card, alteration of statistics, etc. Recently the use of a new billing form has been instituted in order that we may be advised of any change in a member's status. For instance, if a member transfers from the active practice of hospital pharmacy, it is necessary to change his status from "active" to "associate" membership. This record will eventually provide a valuable source of statistical information concerning our total membership; however, these statistics cannot be compiled until this new system has been in effect at least one full year, at which time we will have had a completed form for each member.

Changes of address also constitute a significant problem. It is estimated that approximately 20 per cent of all our members change their address annually. This involves altering the records of each individual, the statistical records, the zoning records (for postal regulations), and the circulation files in Hamilton.

Members of the AMERICAN SOCIETY OF HOSPITAL PHARMACISTS are billed for their dues on an annual basis at the time of the anniversary of their membership. Billing

is usually coordinated with that in the American Pharmaceutical Association. Prior to January 1st the bills for the two organizations were sent together. At the present time SOCIETY bills are sent separately in order to facilitate office routine.

Members who are dropped from the membership rolls fall into one of the following categories—nonpayment of dues, resignation, and deceased. Members who are delinquent are advised by form letter at two month intervals and dropped from the rolls after a period of one year.

The Division staff is interested in promoting and assisting the AMERICAN JOURNAL OF HOSPITAL PHARMACY in any way possible. Your publication has made another great stride in its progress during the past year by being published on a monthly instead of a bi-monthly basis. This has necessitated some changes in the routine to facilitate matters; however, we have continued to handle several aspects of the work at the American Pharmaceutical Association headquarters, including subscription records, reprints, bookkeeping, and copy for some sections.

Although the bookeeping for the JOURNAL account is in no way connected with the Division office, it is handled by the American Pharmaceutical Association bookkeeper in the Washington headquarters.

Copy for the new members section, the positions section and, at the present time, for the section on Therapeutic Trends, is prepared in the Division office.

Complete control for both sets of addressograph plates for the JOURNAL circulation is maintained in the Division office, including additions, changes and deletions. Every attempt is made to keep the Editor and the officers of the SOCIETY completely informed regarding all details of this work carried on in the Division office.

Since the membership records, circulation lists, etc., are kept in the Division office, it is important that there be close cooperation between this office and that of the Secretary of the SOCIETY. During the past year we have worked closely with Mrs. Francke, by assisting with many of the SOCIETY's secretarial duties. The correspondence which relates particularly to membership is handled in the Washington office, as are all mailings to either the total membership or to officers of the affiliated chapters. We have received close cooperation from the secretaries of the affiliated chapters in that copies of the reports of their meetings, etc. are usually directed both to Mrs. Francke and the Director of the Division.

Usually, the President or the Secretary actually writes the letters that are sent to the total membership, and although their signatures are carried on the letters, we have assisted by sending the mailings from the Division office.

The majority of the material concerning the election of officers is handled in the Division office and the ballots are counted by a Board of Canvassers, which is appointed by the President of the SOCIETY. It is almost essential that this activity be carried on in the Washington office since all ballots must be checked against the membership records to determine voting eligibility. The work of the Board of Canvassers is certified to the Secretary of the SOCIETY.

It is also necessary to work closely with the Secretary of the SOCIETY in planning for the Annual Meeting. This is particularly true with regard to printing and mailing the programs, coordinating the lists of delegates from the affiliated chapters and checking the list of members from each affiliated chapter with the membership records of both national organizations.

Finances

The finances for all general activities carried on in the Division office are, at the present time, provided by the American Pharmaceutical Association. The largest single finance item is for salaries, but exhibits, travel and general office expense constitute a significant portion of the Division budget. The SOCIETY pays for postage, stationery, and supplies that are related directly to SOCIETY affairs. When printing for the SOCIETY, of items such as the annual program, is done at the American Pharmaceutical headquarters, it is charged to the SOCIETY on an actual cost basis. Occasionally it is not possible to do this work in our building, due to limited facilities, and in these instances work is done by commercial firms.

Summary

In compiling this report we have purposely provided a rather large amount of detail in order to acquaint members of the SOCIETY with just what we do in the Division office. It is not possible to list the various duties under each specific function because many of the duties help to accomplish more than one function. However, we are of the opinion that the functions listed in the Agreement for the Division between the American Pharmaceutical Association and the AMERICAN SOCIETY OF HOSPITAL PHARMACISTS have received attention commensurate with the personnel, finances, and resources available. The Division staff is most anxious to expand their program to better serve the hospital pharmacy objectives of both the AMERICAN SOCIETY OF HOSPITAL PHARMACISTS and the American Pharmaceutical Association.

The past year has provided a real challenge in serving the ever-growing needs of this important specialized field of the pharmaceutical profession. It has been an unusual pleasure to work with Mr. Godley, Mr. Barnett, Mrs. Francke and Sister M. Berenice. The officers of each of the affiliated chapters have been exceptionally cooperative and most important, in the total experience, there has been the opportunity of working with you, the practicing hospital pharmacists of the United States.

Report of the Committee on Policy of the Division of Hospital Pharmacy

ROBERT P. FISCHELIS, *Chairman*

Mr. Parker has given you an excellent summary of the activities of the Division of Hospital Pharmacy. He has not mentioned the fact that the Chairman of the Committee on Policy is in constant contact with the Director of the Division, so that important questions dealing with hospital pharmacy, in which both the American Pharmaceutical Association and the AMERICAN SOCIETY OF HOSPITAL PHARMACISTS are interested, are decided with the interest of both organizations in mind.

In the fiscal year 1957, the American Pharmaceutical Association contributed approximately $18,000 to the maintenance of the Division of Hospital Pharmacy. This represents a little less than one-half of the total dues paid by the members of the AMERICAN SOCIETY OF HOSPITAL PHARMACISTS to the American Pharmaceutical Association. Our Association is glad to make this substantial contribution to the development of hospital pharmacy because it realizes that whatever it does for hospital pharmacy, it also does for pharmacy as a whole.

I might point out also that the members of the staff of the Division of Hospital Pharmacy, and especially Mr. Parker, have been very helpful in coordinating their functions with those of the other members of the staff of the A.Ph.A.

There has been no meeting of the Policy Committee since the New York convention in 1957, but members of the Committee have been contacted in connection with various matters that have arisen and required consultation.

One very important assignment which has been turned over to the Policy Committee has received a great deal of study and attention, namely the accreditation of hospital pharmacy internship programs. We realize how important it is that this project should be under way, and it actually is under way. Mr. Parker has done considerable exploratory work in connection with it. He has visited a number of hospitals and conferred with the pharmacy staffs in order to test out the practicability of the standards.

We have recently received an appropriation which will enable us to send a visiting team to a number of hospital pharmacies which have made application for approval of their internship programs.

You all know that the Joint Commission on the Accreditation of Hospitals has included in its scoring of the acceptability of hospitals for accreditation, certain requirements with respect to hospital pharmacies. It is our sincere desire to work as closely with the national Commission as possible, and to have its approval of the activity to be undertaken in this specialized field.

Having been very close to the accreditation procedure of a number of educational agencies and recognizing the natural aversion to the ordinary accreditation procedure which is manifested quite generally among educational institutions and other groups subject to accreditation procedures, we are naturally anxious to avoid the unfavorable reactions which are frequently encountered in connection with accreditation procedures.

It is our hope to implement the assignment of accrediting hospital pharmacy internship programs in time to be of benefit to the 1958 graduates of colleges of pharmacy.

One of the advantages of close affiliation between the American Pharmaceutical Association and the AMERICAN SOCIETY OF HOSPITAL PHARMACISTS is the opportunity for the SOCIETY to share in the many programs that come to the attention of the A.Ph.A. when such programs have definite hospital implication. This happens in connection with Federal civil defense; national defense and security; health, education and welfare projects, such as the National Health Census; the various conferences dealing with such projects as nursing homes; problems of the aged; the distribution of drugs in emergencies and epidemics, and for special research purposes.

It has been our policy to send the Director of the Division to many of the meetings and conferences to which the American Pharmaceutical Association is invited, so that there may be hospital pharmacy participation. And we make available to him the planning and thinking of the Council and committees of the American Pharmaceutical Association and receive from him in turn the reactions of hospital pharmacists to proposals made at these conferences.

If I may add a personal word to these general remarks in behalf of the American Pharmaceutical Association and the Policy Committee, I would like to express my appreciation of the opportunity to meet with your Executive Committee, and to have the fine cooperation which has been extended to me by your officers, and especially your Secretary and the Editor of your splendid JOURNAL.

It is always a pleasure to work with your group, and I can assure you that the officers and the Council of the American Pharmaceutical Association have become so accustomed to this cooperative procedure that it has taken the form of an established program and fixed policy which is no longer an experiment but is looked upon as one of the normal and continuing activities of the Association.

Affiliated Chapters and Officers

Regional Chapters

SOUTHEASTERN SOCIETY OF HOSPITAL PHARMACISTS

President, William W. Taylor, No. Carolina Memorial Hospital, Chapel Hill, N. C.; *Vice-President*, Malcolm F. Claus, Southern Baptist Hospital, 1700 Napolean Ave., New Orleans, La.; *Secretary-Treasurer*, James W. Mitchener, Carbarrus Memorial Hospital, Concord, N. C.

State and Local Chapters

Alabama

SOCIETY OF ALABAMA HOSPITAL PHARMACISTS

President, Colin Jack Cole, V. A. Hospital, 700 S. 19th St., Birmingham 3, Ala.; *Vice-President*, William H. Adams, Jr., University Hospital, Birmingham 3, Ala.; *Secretary-Treasurer*, Earl Cobb, V. A. Hospital, 700 S. 19th St., Birmigham 3, Ala.

Arizona

ARIZONA SOCIETY OF HOSPITAL PHARMACISTS

President, Reed M. Ames, 1447 E. San Juan St., Phoenix, Ariz.; *Vice-President*, Conrad A. Bohannon, 2413 W. Washington St., Phoenix, Ariz.; *Secretary*, June G. Kimberlin, 3913 W. Indian School Rd., Phoenix, Ariz.; *Treasurer*, C. D. Lightfoot, 4542 E. Calle Redonda, Phoenix, Ariz.

California

NORTHERN CALIFORNIA SOCIETY OF HOSPITAL PHARMACISTS

President, Mathilde Herby, 565 Montclair Ave., Oakland, Calif.; *Vice-President*, Jessie Lavender, 9316 MacArthur Blvd., Oakland, Calif.; *Secretary*, Molly Chin, 242 Joice St., San Francisco, Calif.; *Treasurer*, Charles Jackson, 49 Duval Drive, South San Francisco, Calif.

SAN DIEGO SOCIETY OF HOSPITAL PHARMACISTS

President, Clifton A. Asche, 405 B Ave., Coronado, Calif.; *Vice-President*, William F. Lester, 2381 Dryden Rd., El Cajon, Calif.; *Secretary*, Dorothy Bitondo, 2454 Calle Quebrada, San Diego, Calif.; *Treasurer*, Marion M. Olson, 3538 Monro, San Diego, Calif.

SOUTHERN CALIFORNIA SOCIETY OF HOSPITAL PHARMACISTS

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Connecticut

CONNECTICUT SOCIETY OF HOSPITAL PHARMACISTS

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Florida

FLORIDA SOCIETY OF HOSPITAL PHARMACISTS

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DADE COUNTY SOCIETY OF HOSPITAL PHARMACISTS

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Georgia

GEORGIA SOCIETY OF HOSPITAL PHARMACISTS

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Illinois

ILLINOIS SOCIETY OF HOSPITAL PHARMACISTS

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Indiana

INDIANA CHAPTER OF THE AMERICAN SOCIETY OF HOSPITAL PHARMACISTS

President, William Wissman, 3434 Glenhurst, Ft. Wayne, Ind.; *Vice-President*, Frank Duncan, 401 Victoria St., Mishawaka, Ind.; *Secretary-Treasurer*, Mildred Wiese, RR 11, Box 678, Indianapolis, Ind.

Iowa

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Louisiana

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Maryland

MARYLAND ASSOCIATION OF HOSPITAL PHARMACISTS

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Secretary, Mary W. Connelly, 6407 Liberty Rd., Baltimore 7, Md.; *Treasurer*, Judy Laegeler, the Johns Hopkins Hospital, Baltimore, Md.

Massachusetts

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Michigan

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Minnesota

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President, Mary Anna Anderson, 777 Cope Ave., St. Paul 13, Minn.; *Vice-President*, Russell Strom, 9307 - 11th Ave., S., Minneapolis, Minn.; *Secretary-Treasurer*, Marie *Perrault*, 4939 - 36th Ave. S., Minneapolis, Minn.

Mississippi

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Missouri

HOSPITAL PHARMACISTS' ASSOCIATION OF GREATER KANSAS CITY

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Secretary, Sister Rose Bernard, Queen of the World Hospital, Kansas City, Mo.; *Treasurer*, Sister Mary Andrew, Providence Hospital, Kansas City, Mo.

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North Carolina

NORTH CAROLINA SOCIETY OF HOSPITAL PHARMACISTS

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Ohio

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President, Theodorsia Tucker, Mercy Hospital, Toledo, Ohio; *Vice-President*, Barbara Lardinais, 651 Waybridge Rd., Toledo, Ohio; *Secretary-Treasurer*, Ann M. Bruggeman, 340 Winthrop St., Toledo 10, Ohio.

Oklahoma

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SOCIETY OF HOSPITAL PHARMACISTS OF THE STATE OF OREGON

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Pennsylvania

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Rhode Island

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South Carolina

SOUTH CAROLINA SOCIETY OF HOSPITAL PHARMACISTS

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Tennessee

TENNESSEE SOCIETY OF HOSPITAL PHARMACISTS

President, Joseph R. Sykes, John Gaston Hospital, Memphis, Tenn.; *Vice-President*, Jewel Harper, V. A. Hospital, Nashville, Tenn.; *Secretary*, Catherine McNeill, Baptist Memorial Hospital, Memphis; *Treasurer*, Barbara Vance, Nashville General Hospital, Nashville, Tenn.

Texas

HOUSTON AREA SOCIETY OF HOSPITAL PHARMACISTS

President, Robert Lantos, University of Texas Medical Branch Hospital, Galveston, Tex.; *Vice-President*, Tom Horner, St. Luke's Episcopal and Texas Children's Hospital, Houston 25, Tex.; *Secretary-Treasurer*, Adela Schneider, Southern Pacific Hospital, Houston 1, Tex.

TEXAS SOCIETY OF
HOSPITAL PHARMACISTS

President, James D. McKinley, Jr., M.D. Anderson Hospital, Houston, Tex.; *Vice-President*, William T. Clarke, Jr., V. A. Hospital, Waco, Tex.; *Secretary*, Susan Campbell, Baptist Memorial Hospital, Beaumont, Tex,; *Treasurer*, Blanche Groos, San Antonio State Hospital, San Antonio, Tex.

Utah

UTAH SOCIETY OF
HOSPITAL PHARMACISTS

President, Charles H. Anderson, Latter-Day Saints Hospital, Logan, Utah; *Vice-President*, Charles E. Johnson, V. A. Hospital, Ft. Douglas, Utah; *Secretary*, Nellie Vanderlinden, Latter Day Saints Hospital, Salt Lake City, Utah; *Treasurer*, William Washburn, Thomas D. Dee Hospital, Ogden, Utah.

Virginia

VIRGINIA SOCIETY OF
HOSPITAL PHARMACISTS

President, Mary Ann Magee, 3516 Patterson Avenue, Richmond, Va.; *Vice-President*, Earl Ross, Norfolk General Hospital, Norfolk, Va.; *Secretary-Treasurer*, Wilson Johnson, Richmond Memorial Hospital, Richmond, Va.

Washington

WASHINGTON STATE
HOSPITAL PHARMACISTS

President, Frank Dondero, P. H. S. Hospital, Seattle, Wash.; *Vice-President*, Paul Breen, 6218 24th N. E., Seattle, Wash.; *Secretary*, Paul Lesage, P. H. S. Hospital, Seattle, Wash.; *Treasurer*, Marguerite Ford, Harborview Hospital, Seattle, Wash.

Wisconsin

WISCONSIN SOCIETY OF
HOSPITAL PHARMACISTS

President, Richard Henry, Madison General Hospital, Madison 3, Wis.; *Vice-President*, Sister M. Agnese, St. Joseph's Hospital, Milwaukee 5, Wis.; *Secretary-Treasurer*, Thora M. Vervoren, Columbia Hospital, Milwaukee 11, Wis.

Affiliated Chapters - Membership Statistics

	Total Voting Members	Members of A.Ph.A. and A.S.H.P.	Members A.Ph.A. but *not* A.S.H.P.	Non-Members
SOUTHEASTERN	126	116	1	9
ALABAMA	28	19	2	7
ARIZONA				
SAN DIEGO	14	12	1	1
NORTHERN CALIFORNIA	72	65	2	5
SOUTHERN CALIFORNIA	132	119	2	11
CONNECTICUT				
FLORIDA				
DADE COUNTY				
GEORGIA				
ILLINOIS	52	52		
MIDWEST	42	36	2	4
INDIANA	47	41	4	2
IOWA				
LOUISIANA	26	22		4
MARYLAND	42	34	1	7
MASSACHUSETTS	97	79	5	13
MICHIGAN	84	48	6	30
MINNESOTA				
MISSISSIPPI				
GREATER KANSAS CITY	13	12		1
GREATER ST. LOUIS	31	29	1	1
NEBRASKA	27	21	1	5
NEW JERSEY				
GREATER NEW YORK	18	16	1	1
NORTHEASTERN NEW YORK	27	24		3
ROCHESTER AREA	16	15		1
SOUTHEASTERN NEW YORK				
WESTERN NEW YORK	29	26		3
NORTH CAROLINA	22	22		
OHIO	95	79	3	13
AKRON	36	30		6
GREATER CINCINNATI	14	14		
CLEVELAND	43	36		7
TOLEDO	15	15		
OKLAHOMA	38	16	2	20
OREGON	22	13	3	6
WESTERN PENNSYLVANIA	69	32	5	32
PHILADELPHIA	126	121	2	3
RHODE ISLAND				
SOUTH CAROLINA				
TENNESSEE	32	23		9
HOUSTON AREA	36	35	1	
TEXAS	53	50	1	2
UTAH	13	12		1
VIRGINA	30	17	3	10
WASHINGTON STATE				
WISCONSIN				
TOTALS	1585	1315	49	221

ASHP CONSTITUTION AND BY-LAWS

Constitution

AS REVISED 1958

Article I. Name, Objectives, and Definitions

Section 1. This Society shall be known as "The American Society of Hospital Pharmacists."

Section 2. The objectives of the SOCIETY shall be: (a) to provide the benefits and protection of a hospital pharmacist to the patient, to the institution which he serves, to the members of the allied health professions with whom he is associated, and to the profession of pharmacy, which they will receive through the skill and art of qualified hospital pharmacists; (b) to improve the qualifications and usefulness of hospital pharmacists through high standards of professional ethics, education, and attainments; (c) to assist in providing for a future adequate supply of such qualified hospital pharmacists; (d) to promote research in hospital pharmacy practices and in pharmaceutical problems in general; (e) to increase the dissemination of pharmaceutical knowledge by providing for interchange of information.

Section 3. A hospital pharmacist shall be defined as any legally qualified pharmacist currently practicing the art and science of pharmacy in a hospital or clinic, or actively engaged in the administration, planning, or supervision of pharmaceutical procedures in hospitals or clinics.

Article II. Membership

The membership of the SOCIETY shall consist of active, associate, and honorary members as provided in Chapter V of the By-Laws.

Article III. Officers

The officers of the SOCIETY shall be a President, a Vice-President, a Secretary, and a Treasurer. The President and Vice-President shall be elected annually for a term of one year as provided in the By-Laws. The President and Vice-President shall hold office for not more than two consecutive terms. The Secretary and Treasurer shall be elected every three years as provided in the By-Laws.

Article IV. Affiliated Chapters

A local or regional group of hospital pharmacists numbering ten or more active members of the SOCIETY and meeting the requirements for affiliation as outlined in Chapter IX, *Article 1* of the By-Laws, may become an affiliated chapter of the AMERICAN SOCIETY OF HOSPITAL PHARMACISTS upon approval of the Executive Committee of the SOCIETY.

Article V. Amendments

Every proposition to alter or amend this Constitution shall be submitted in writing by two active members at the first session of the Annual Meeting of the SOCIETY, and shall be approved by a plurality of the active membership in attendance at this session. It shall then be submitted to the entire active membership for vote by mail ballot, in the same manner as in the balloting for officers, Chapter I, *Articles 2* and *3* of the By-Laws, and shall be sent out as part of the ballot for officers. Should an amendment to the Constitution not be approved by a plurality vote at the Annual Meeting, it may then be referred to the active membership by mail ballot on the request of ten active members.

By-Laws

Chapter I. Election of Officers

Article 1. NOMINATION OF PRESIDENT, VICE-PRESIDENT, AND TREASURER. At the first session of each Annual Meeting of the SOCIETY, the President shall appoint a Committee of three members who shall nominate two candidates for each of the following officers: President and Vice-President. Every third year the Committee, on the recommendation of the Executive Committee, shall also nominate two or more candidates for the office of Treasurer. The Committee shall present its nominations at the final session of the Annual Meeting, at which time additional nominations may be made from the floor.

Article 2. BALLOTS. The names of the candidates together with a brief review of their professional backgrounds shall be submitted by the Secretary by mail to every active member of the SOCIETY within two months after their nomination. The member shall indicate on the ballot his choice of candidates for the offices to be filled and return the same by mail within 30 days of the date printed on the ballot.

Article 3. COUNTING OF BALLOTS. The ballots of the dues-paid members only, postmarked within 30 days of the date printed on the ballot, are to be submitted by the Secretary to the Board of Canvassers, who shall count the votes. The Board of Canvassers shall certify to the President and the Secretary the results of the election. The Secretary shall notify all candidates of the results of the election, and the results of the election shall also be published in THE BULLETIN OF THE AMERICAN SOCIETY OF HOSPITAL PHARMACISTS.

Article 4. INSTALLATION OF OFFICERS. The officers thus elected by a plurality of votes, together with the Secretary elected as hereinafter provided, shall be installed at the final session of the Annual Meeting of the SOCIETY following their election.

Article 5. ELECTION OF SECRETARY. The Secretary of the SOCIETY shall be nominated by the Executive Committee and elected every third year by the House of Delegates of the SOCIETY.

Chapter II. Duties of Officers

Article 1. PRESIDENT AND VICE-PRESIDENT. The President, or in his absence, the Vice-President, shall preside at all meetings. He shall have the usual administrative powers of his office, except as otherwise provided. He shall appoint all committees not otherwise provided for and shall be ex-officio member of all committees. He shall appoint the Board of Canvassers which shall consist of at least three active members of the SOCIETY. He shall, with approval of the Executive Committee, direct the activities and determine the policies of the SOCIETY. He shall cooperate with the activities of the Division of Hospital Pharmacy of the American Pharmaceutical Association and the AMERICAN SOCIETY OF HOSPITAL PHARMACISTS, working closely with the Director of the Division. He shall attempt to meet with each of the several affiliated chapters of the SOCIETY following his installation. He shall preside over the House of Delgates.

Article 2. SECRETARY. The Secretary shall be the executive officer of the SOCIETY and shall work under the direction of the Executive Committee. The Secretary shall keep minutes of the sessions of the SOCIETY and maintain a roster of its members. He shall notify individuals of their appointment to committees, notify members of the time and place of all meetings, and conduct the correspondence of the SOCIETY. He shall collect the dues of the members. The Secretary shall prepare and mail to all eligible voting members appropriate ballot forms for the annual voting of the SOCIETY. He shall be an ex-officio member of all standing committees. He shall assist where possible, with the secretarial activities of all standing and special committees. He shall keep the President informed of all activities by forwarding to him copies of pertinent correspondence. He shall present a written report of his work to the Annual Meeting of the SOCIETY. The Secretary shall be Secretary of the House of Delegates. He shall perform such other duties as may be assigned by the Executive Committee to implement the policies of the SOCIETY. He shall be empowered to use the title of Executive Secretary.

Article 3. TREASURER. The Treasurer and Secretary shall establish a bank account in the name of the AMERICAN SOCIETY OF HOSPITAL PHARMACISTS to receive, disburse, and account for all monies received from membership dues. The Treasurer, or in his incapacity, the Secretary, shall disburse them at the direction of the Finance Committee. The Treasurer shall have the account audited and shall prepare a statement of finances for the Annual Meeting.

Chapter III. Executive Committee

The Executive Committee shall consist of the officers of the Society, the chairman of each standing committee, the President-Elect, and the Past-President of the Society. It shall meet on the call of the President of the Society, and shall be empowered to act for the Society during the period between annual meetings.

Chapter IV. Accomplishment of Objectives

The objectives of the Society as outlined in Article I, *Section 2* of the Constitution shall be accomplished by: (a) establishing, implementing, and revising the Minimum Standard for Pharmacies in Hospitals; (b) working with the medical profession, in extending the rational use of medicaments; (c) acting as a clearing house for problems and challenges confronting hospital pharmacy; (d) maintaining proper liaison between pharmacists in hospitals, those engaged in general pharmaceutical practice, and those associated with the allied health professions; (e) developing and making available to the accredited colleges of pharmacy a course outline to serve as a guide for an undergraduate course in hospital pharmacy; (f) providing a standardized hospital training for graduates of accredited colleges of pharmacy through establishing, implementing, and revising the Minimum Standard for Pharmacy Internships in Hospitals; (g) actively cooperating with the Division of Hospital Pharmacy of the American Pharmaceutical Association and the American Society of Hospital Pharmacists.

Chapter V. Membership

Article 1. MEMBERS. The membership of the Society shall consist of individuals interested in the objectives of the Society.

(a) ACTIVE MEMBERS. Active members shall be hospital pharmacists as defined in Article I, *Section 3* of the Constitution, who are members of the American Pharmaceutical Association.

(b) HONORARY MEMBERS. Honorary members may be elected from among individuals who are or have been especially interested in, or who have made outstanding contributions to hospital pharmacy practice. Honorary members shall not pay dues nor shall they be eligible to vote or to hold office.

(c) ASSOCIATE MEMBERS. Associate members may be elected from among individuals other than hospital pharmacists who by their work in the health services, the teaching of prospective hospital pharmacists, or otherwise contributing to hospital pharmacy, make themselves eligible for membership. Associate members shall not be entitled to hold office or to vote. Associate members must be members of the American Pharmaceutical Association.

Article 2. DUES. Dues for active and associate members shall be ten dollars ($10.00) per year, payable in advance.

Article 3. APPLICATIONS.

(a) ACTIVE MEMBERS. Applications for active membership shall be prepared on the standard form and forwarded to the Secretary of the Society. Dues should accompany the application as indicated in Chapter V, *Article 2* of the By-Laws. Applicants shall be sponsored by at least one active member of the Society. The Secretary may approve all applications for membership, or when there is doubt as to qualifications of the applicant, he may require concurrence by the Membership and Organization Committee. When an active member so changes his vocation as to no longer fit the definition of a hospital pharmacist, he shall automatically become an associate member with the rights and privileges of associate membership.

(b) HONORARY MEMBERS. Nominations for honorary membership shall be approved by unanimous vote of the Executive Committee and shall be presented for vote of the membership at an Annual Meeting.

(c) ASSOCIATE MEMBERS. In addition to the requirements for active membership as indicated in Chapter V, *Article 3* of the By-Laws, applicants for associate membership shall be sponsored by at least two active members of the Society.

Article 4. PERIOD OF MEMBERSHIP. The period of membership shall coincide with the period of membership in the American Pharmaceutical Association. Dues are payable and due on the anniversary date of this period. Membership in the Society and the obligation for dues will continue from year to year unless a member's resignation, signed by the member, is received by the Secretary prior to the end of the year for which dues have been paid.

Any member in arrears for dues for one year shall cease to be a member of the Society, provided that at least two weeks before his name is removed from the rolls, the Secretary shall send him a written notice of his delinquency together with a copy of the By-Laws pertaining to the subject. Such a person may be reinstated as a member provided his arrears have been paid and payment of current membership dues is made.

Article 5. CERTIFICATE. All members will receive from the Secretary an appropriate certificate attesting to membership in the Society.

Chapter VI. Standing Committees

There shall be five standing committees of the Society, each consisting of three or more members appointed by the President of the Society with concurrence of the Past-President and other officers of the Society.

Article 1. PROGRAM AND PUBLIC RELATIONS COMMITTEE. The Program and Public Relations Committee shall assume responsibility for the program at the Annual Meeting of the Society; shall assist in the sponsoring of the programs for local, state, and national conventions of medical, dental, hospital, and pharmaceutical associations, working in conjunction with the program committees of the respective local and regional hospital pharmacy associations; and shall maintain a reservoir of suitable material representative of hospital pharmacy for display at these various conventions. Where possible it shall assist in the formulation of the program for the annual Institute on Hospital Pharmacy. It shall assist the Secretary of the Society in collecting and making available for publication, information on the activities of hospital pharmacists. It shall seek the cooperation of the Division of Hospital Pharmacy in these activities.

Article 2. MEMBERSHIP AND ORGANIZATION COMMITTEE. The Membership and Organization Committee shall seek desirable members. It shall develop such plans as may be found desirable to establish state, district, and local affiliated groups of hospital pharmacists. It shall seek the cooperation of the Division of Hospital Pharmacy in these activities.

Article 3. MINIMUM STANDARDS COMMITTEE. The Minimum Standards Committee shall propose the Minimum Standard for Pharmacies in Hospitals and the Minimum Standard for Pharmacy Internships in Hospitals. It shall also develop a syllabus for specialized hospital pharmacy courses. It shall obtain opinions on hospital pharmacy educational practices from those persons offering such training, and present an annual review of such practices as differ from the the standards and that offer features desirable for other courses to incorporate. It shall review both the standards and the syllabus yearly in light of modern principles of hospital pharmacy practice and make necessary recommendations for revision. It shall seek the cooperation of the Division of Hospital Pharmacy in these activities.

Article 4. FINANCE COMMITTEE (ASHP). The Finance Committee shall consist of three members: the President, the Secretary, and the Treasurer, who may, without further action, pass on all expenditures. The Finance Committee shall prepare a budget for the succeeding year and submit it to the Executive Committee for approval.

Article 5. COMMITTEE ON PHARMACISTS IN GOVERNMENT SERVICE. The Committee on Pharmacists in Government Service shall assemble current information pertaining to problems affecting pharmacists in government service. Periodic review shall be made by the Committee of duties performed by hospital pharmacists in government service for the purpose of recommending methods conducive to the improvement of hospital pharmacy service. The findings and recommendations of the Committee shall be transmitted to the Director of the Division of Hospital Pharmacy, who shall be responsible for obtaining evaluation of the findings and recommendations for the purpose of resolving and implementing them, either through the national Committee on the Status of Pharmacists in Government Service, or other indicated organizations.

Chapter VII. Special Committees

The President may appoint such special committees as he feels are required for the activities of his term of office, each consisting of three or more members appointed by him with concurrence of the Past-President and other officers of the Society.

Chapter VIII. House of Delegates

Article 1. MEMBERSHIP. The House of Delegates shall consist of the Executive Committee of the Society, the chairman of each special committee of the Society, voting delegates, and fraternal delegates. Unless otherwise specified, meetings shall be open to all hospital pharmacists. The power of vote is restricted to the Executive Committee, special committee chairmen, and voting delegates.

(a) VOTING DELEGATE. Each affiliated chapter of the Society shall be entitled to designate such delegates as its membership warrants and in a manner to be determined by each chapter. Each affiliated chapter with 50 or fewer active members is entitled to one delegate. Each affiliated chapter with more than 50 active members is entitled to one delegate for each additional 50 active members.

(b) FRATERNAL DELEGATE. Any branch or department of the United States Government such as the Army, Navy, Air Force, Public Health Service, and Veterans Administration shall

be entitled to designate one delegate. Such fraternal delegates may be granted the privilege of the floor but shall not be entitled to vote. The Secretary of the Society shall annually initiate an invitation to the ranking medical officer of each of the governmental health services to appoint said delegate.

Article 2. SELECTION OF DELEGATES. Delegates shall be designated by each affiliated chapter and confirmed by the Secretary of the Society. Organizations entitled to membership must notify the Secretary of the names of delegates and alternates prior to each Annual Meeting so that credentials may be prepared.

Article 3. MEETINGS. The House of Delegates shall meet at a time designated by the President of the Society, on the day preceding the first day of the Annual Meeting of the Society. At the discretion of the President, additional sessions of the House of Delegates may be called during the period of the Annual Meeting.

Article 4. OFFICERS. The officers of the House of Delegates shall be the officers of the Society.

Article 5. PURPOSE. The House of Delegates shall assist the Executive Committee in the formulation of policy. Where possible, all items of new business, proposed amendments to the Constitution and By-Laws, and all controversial matters should be presented first to the House of Delegates and then to the first session of the Annual Meeting. It shall elect the Secretary of the Society. Each organization entitled to representation shall provide its delegate with a concise report of the activities and recommendations of the organizations, which shall be presented at the call for reports. This report will also be presented in writing to the Secretary at the meeting. This will provide an opportunity for each affiliated chapter, through its delegate, to present comments and recommendations on local and national matters pertaining to hospital pharmacy practice. If it is impossible for an organization to send a delegate to this meeting, said organization shall submit its written report to the Secretary prior to the meeting.

Article 6. ORDER OF BUSINESS. At stated or adjourned meetings, business shall proceed in the following order:

1. Call to order.
2. Roll call of delegates.
3. Reading and adoption of minutes.
4. Appointment of committees.
5. Receipt of reports and other communications to the House of Delegates.
6. Unfinished business.
7. New business.
8. Adjournment.

Chapter IX. Affiliated Chapters

Article 1. REQUIREMENTS FOR AFFILIATION.

(a) All members of every affiliated chapter shall be members of the American Society of Hospital Pharmacists. There must be a minimum of ten active members before a group may apply for affiliation with the national organization.

(b) The chapter shall submit a list of officers and membership, minutes of the meeting at which the request for affiliation was approved, and a statement of frequency of meetings. Subsequent changes in officers and in times of meetings should be forwarded to the Secretary of the Society.

(c) The Constitution and By-Laws shall be approved by the Executive Committee of the Society and should be patterned after the Constitution and By-Laws of the Society. Any subsequent change in the Constitution and By-Laws must be approved by the Executive Committee of the Society.

(d) The formal application for affiliation should be initiated by the President and Secretary of the chapter and directed to the Secretary of the Society who will submit such application to the Executive Committee of the Society for approval.

Article 2. MEMBERSHIP. Membership in affiliated chapters shall be restricted to active, associate, and honorary members as defined in Chapter V, *Article 1* of the By-Laws. Persons not so classified may attend meetings of the Chapter at the invitation of the Executive Committee of the chapter.

Article 3. DUES. Dues in affiliated chapters may be set at the discretion of the Executive Committee of the chapter.

Article 4. REPORTS. A copy of the minutes of every meeting of affiliated chapters should be sent to the Secretary of the Society immediately following each meeting, and not later than ten days following the meeting date. Additions to and changes in the membership of the chapter should be included therein.

Article 5. REPRESENTATIVES TO THE HOUSE OF DELEGATES. Each affiliated chapter is entitled to representation in the House of Delegates as outlined in Chapter VIII. *Article 1*, (a) of the By-Laws of the Society.

Chapter X. Publications

Article 1. OFFICIAL PUBLICATION. The Bulletin of the American Society of Hospital Pharmacists shall be the official publication of the Society. All papers presented at the Annual Meeting of the Society shall be submitted to the Editor of The Bulletin for review and, if suitable, for publication. Papers may be released for publication elsewhere on the approval of the Editor of The Bulletin.

Article 2. EDITOR. The editor of The Bulletin shall be appointed by the Executive Committee of the Society.

Article 3. FINANCES. (The Bulletin).

(a) The Secretary of the Society shall establish a bank account in the name of The Bulletin of the American Society of Hospital Pharmacists. All monies received from advertising in, sale of, and subscriptions to The Bulletin and all bills relative to publishing The Bulletin shall be handled through this account. The Editor of The Bulletin and the Secretary of the Society shall receive, disburse, and account for all monies in this account. This account shall be audited annually.

(b) The Executive Committee of the Society shall be empowered to transfer such excess funds as may accrue in this account to either the American Society of Hospital Pharmacists or to the Division of Hospital Pharmacy.

(c) A contribution of one dollar per member will be made annually from the Society funds toward publication of The Bulletin. The amount for each year shall be determined by the total membership as reported at the Annual Meeting.

Chapter XI. Annual Meetings

Annual meetings of the Society shall be held in conjunction with annual meetings of the American Pharmaceutical Association.

Chapter XII. Quorum

Fifteen members shall constitute a quorum for an Annual Meeting.

Chapter XIII. Order of Business

At stated or adjourned meetings, business shall proceed in the following order:

1. Call to order.
2. Roll call of delegates.
3. Reading and adoption of minutes.
4. Appointment of committees.
5. Ratification of special committees.
6. Receipt of reports and other communications to the Society.
7. Unfinished business.
8. New Business.
9. Report of Resolutions Committee.
10. Report of Nominating Committee.
11. Installation of officers.
12. Adjournment.

Chapter XIV. Affiliation

The Society shall be affiliated with the American Pharmaceutical Association and subject to such rules and regulations as may be mutually agreed upon to govern the Society.

Chapter XV. Seal and Insignia

Article 1. SEAL. The Society shall have a seal which shall consist of the device of a circle with the word "Seal" in the center surrounded by the words "American Society of Hospital Pharmacists" arranged within the perimeter.

Article 2. INSIGNIA. The insignia of the Society shall consist of the device of a mortar and pestle, the lip of the mortar being at about 250° and the handle of the pestle at about 315°, with the words "American Society of Hospital Pharmacists" inscribed through this in a semicircle, meeting the pestle on the left at juncture of mortar and pestle, the whole of this centered in a white cross on a green background.

Chapter XVI. Amendments

Every proposition to alter or amend these By-Laws shall be submitted in writing by two active members at the first session of the Annual Meeting of the Society and voted upon at the final session of the same Annual Meeting. A plurality of votes is required for approval.

ASHP CERTIFICATE OF INCORPORATION

WE THE UNDERSIGNED, all being of full age and citizens of the United States, and two of whom are residents of the District of Columbia, desiring to form a corporation pursuant to and in conformity with Title 29 of Chapter 6 of the 1940 Code of the District of Columbia, do certify:

FIRST: That the name of the corporation shall be AMERICAN SOCIETY OF HOSPITAL PHARMACISTS, INC.

SECOND: That the period of its duration shall be perpetual.

THIRD: The particular objects of the corporation shall be: (a) To provide the benefits and protection of a qualified hospital pharmacist to the patient, to the institution which he serves, to the members of the allied health professions with whom he is associated, and to the profession of pharmacy in general;

(b) To improve the qualifications and usefulness of hospital pharmacists through the development of high standards of professional ethics, education and attainment;

(c) To assist in providing for a future adequate supply of such qualified hospital pharmacists;

(d) To promote research in hospital pharmacy practices and in pharmaceutical problems in general;

(e) To increase the dissemination of pharmaceutical knowledge by providing for interchange of information, nationally and internationally;

(f) To assist in fostering the rational and safe use of drugs and medications in hospitals, clinics, diagnostic centers and related institutions, through the collection, study, analyses, evaluation, publication and distribution of information relating to the actions, uses, side effects, contraindications, toxicities, precautions, dosage and dosage-forms of drugs and pharmaceuticals with the object of coordinating the efforts of pharmacists with those of physicians and others in the allied health field, to better serve the health needs of the public;

(g) To plan, organize and conduct, individually as well as in cooperation with related professional organizations, educational programs, institutes, seminars, conferences and special lectures and demonstrations in order to further the professional, scientific and technical abilities of hospital pharmacists to better serve the interests of public health and patient care.

(h) To stimulate, foster, evaluate and encourage the establishment and improvement of specialized training programs in hospital pharmacy, including internships, residencies, indoctrination courses and similar programs of organized training, in order to insure the entrance of properly qualified individuals into the specialty of hospital pharmacy.

(i) To gather, prepare and publicize articles, bibliographies, formularies, studies, surveys, compilations and other forms of information pertaining to the professional, scientific, administrative, economic and technical aspects of hospital pharmacy, with the object of increasing the services of hospital pharmacists to public health.

(j) To plan, organize, initiate and conduct surveys and studies on basic problems and questions pertaining to pharmacy and related services in hospitals, clinics, diagnostic centers and related institutions in order to extend and improve the services of hospital pharmacists to the public health in general, and to the sick of the community in particular.

The objectives of the SOCIETY as outlined in the foregoing Article shall be accomplished by:

(a) Establishing, implementing and revising the Minimum Standards for Pharmacies in Hospitals;

(b) Working with the medical profession in extending the rational use of medicaments;

(c) Acting as a clearing house for problems and challenges confronting hospital pharmacy;

(d) Maintaining proper liaison between pharmacists in hospitals, those engaged in general pharmaceutical practice, and those engaged in, or associated with, the allied health professions;

(e) Developing and making available to the accredited colleges of pharmacy a course outline to serve as a guide for an undergraduate course in hospital pharmacy;

(f) Providing a standardized hospital training for graduates of accredited colleges of pharmacy through establishing, implementing and revising the Minimum Standard for Pharmacy Internships in Hospitals;

(g) Actively cooperating with the Division of Hospital Pharmacy of the American Pharmaceutical Association and the AMERICAN SOCIETY OF HOSPITAL PHARMACISTS.

This corporation shall at all times cooperate with and further the cause of the American Pharmaceutical Association, its aims and objects. In general, it shall do all and everything necessary, suitable and proper for the accomplishment of any of the purposes or the attainment of any of the objects or the furtherance of any of the purposes hereinbefore set forth. It may have one or more affiliated Chapters and exercise all or any of its objects and powers anywhere in the United States and in all or any foreign countries.

FOURTH: This is a non-profit corporation; no stock in it shall be sold or authorized and no member, director or officer shall derive any profit from its operations. It is intended that the corporation shall be conducted so as to be entitled to receive any and all tax benefits or exemptions which may from time to time be granted to non-profit, educational and eleemosynary corporations and the like, and to all firms, corporations, members and individuals making gifts, contributions or bequests thereto.

The corporation may purchase, lease and dispose of such real or personal property as may be necessary for the purposes of its business, and receive any gift, device, bequest and contribution necessary for its maintainance, and to promote its objectives. It shall not be responsible for acts of individual members and affiliated national and local groups, including state and local Chapters. The property of its members, directors and officers shall not be subject to, or charged with, the payment of corporate debts or obligations.

FIFTH: The address of its principal office in the District of Columbia shall be American Pharmaceutical Association Headquarters, 2215 Constitution Ave, N.W., Washington, D. C.

SIXTH: The initial board of directors shall consist of nine members who shall serve as directors until the first annual meeting or until their successors are elected and qualify. Their names and addresses are:

George F. Archambault, 5916 Melvern Drive, Bethesda, Md.

Claude Busick, St. Joseph's Hospital, Stockton, Calif.

Gloria Niemeyer, 2215 Constitution Ave., N.W., Washington, D.C.

Sister Mary Berenice, St. Mary's Hospital, St. Louis, Mo.

Allen V. R. Beck, Indiana University Medical Center, Indianapolis, Ind.

Anna D. Thiel, Jackson Memorial Hospital, Miami, Fla.

John Scigliano, Clinical Center, Nat'l Institutes of Health, Bethesda, Md.

Paul F. Parker, University of Chicago Clinics, Chicago, Illinois.

Charles G. Towne, V.A. Center, Wilshire-Sawtelle, Los Angeles, Calif.

The names and addresses of the incorporators are:
George F. Archambault, 5916 Melvern Drive, Bethesda, Md.
Grover C. Bowles, 3505 T Street, N.W., Washington, D. C.
Gloria Niemeyer, 2426 19th Street, N.W., Washington, D. C.

The corporation reserves the right to amend, alter, change or repeal any of the provisions of this Certificate of Incorporation, and to make and amend by-laws for the regulation and management of its affairs not inconsistent with the laws of the District of Columbia and the Constitution of the United States.

IN TESTIMONY we have this 9 day of March, 1955 hereunto set our hands and seals.

George F. Archambault
Grover C. Bowles
Gloria Niemeyer

DISTRICT OF COLUMBIA, ss:

I, *Kittie A. Burt*, a notary public in and for the District of Columbia, do hereby certify that GEORGE F. ARCHAMBAULT, GROVER C. BOWLES and GLORIA NIEMEYER, parties to a Certificate of Incorporation bearing date 9 March 1955 and hereto annexed, being personally well known to me, personally appeared before me in said District of Columbia on the day and year aforesaid, and severally acknowledged the same before me and signed the same for the purpose therein set forth.

Given under my hand and notarial seal this 9 day of March, 1955.

Kittie A. Burt
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1942 Denver, Colo. August 17, 1942	Organizational Meeting - Officers of Subsection Presided ASHP Officers elected to serve 1942-1943			
1942-43 Columbus, Ohio Sept. 1943	H.A.K. Whitney	Donald A. Clarke	Hazel Landeen	Sister Ludmilla
1943-44 Cleveland, Ohio Sept. 1944	Don E. Francke	Hazel Landeen	I. T. Reamer	Sister Mary John
1944-45 no meeting	Don E. Francke	Vacant	I. T. Reamer	Sister Mary John
1945-46 Pittsburgh, Pa. Aug. 1946	Don E. Francke	Anna D. Thiel	I. T. Reamer	Sister Mary John
1946-47 Milwaukee, Wis. Aug. 1947	Hans S. Hansen	Jennie Banning	Walter Frazier	Sister Gladys Robinson
1947-48 San Francisco, Calif. August 9-10, 1948	John J. Zugich	Margaret Gary	Leo Godley	Sister Mary Etheldreda
1948-49 Jacksonville, Fla. Apr. 25-26, 1949	W. Arthur Purdum	Geraldine Stockert	J. R. Cathcart	Sister Jeanne Marie
1949-50 Atlantic City, N.J. May 1-2, 1950	Herbert L. Flack	W. Paul Briggs	Gloria Niemeyer	Sister M. Junilla
1950-51 Buffalo, N. Y. Aug. 27-28, 1951	I. T. Reamer	Grover C. Bowles	Gloria Niemeyer	Sister M. Jeanette
1951-52 Philadelphia, Pa. Aug. 21-22, 1952	Walter Frazier	Jane Rogan	Gloria Niemeyer	Sister Mary Raphael
1952-53 Salt Lake City, Utah Aug. 16-18, 1953	Grover C. Bowles	George Phillips	Gloria Niemeyer	Sister Mary Florentine
1953-54 Boston, Mass. Aug. 22-24, 1954	Allen V. R. Beck	Adela Schneider	Gloria Niemeyer	Anna Thiel
1954-55 Miami Beach, Fla. May 1-3, 1955	George F. Archambault	Claude Busick	Gloria Niemeyer	Sister Mary Berenice
1955-56 Detroit, Mich. Apr. 9-10, 1956	Claude Busick	Milton Skolaut	Gloria Niemeyer	Sister M. Rebecca
1956-57 New York, N. Y. Apr. 28-30	Paul Parker	Milton Skolaut	Gloria Francke	Sister M. Berenice
1957-58 Los Angeles, Calif. Apr. 20-22	Leo F. Godley	Charles Barnett	Gloria Francke	Sister M. Berenice

*Chairman and Vice-Chairman from 1942 to 1947.